

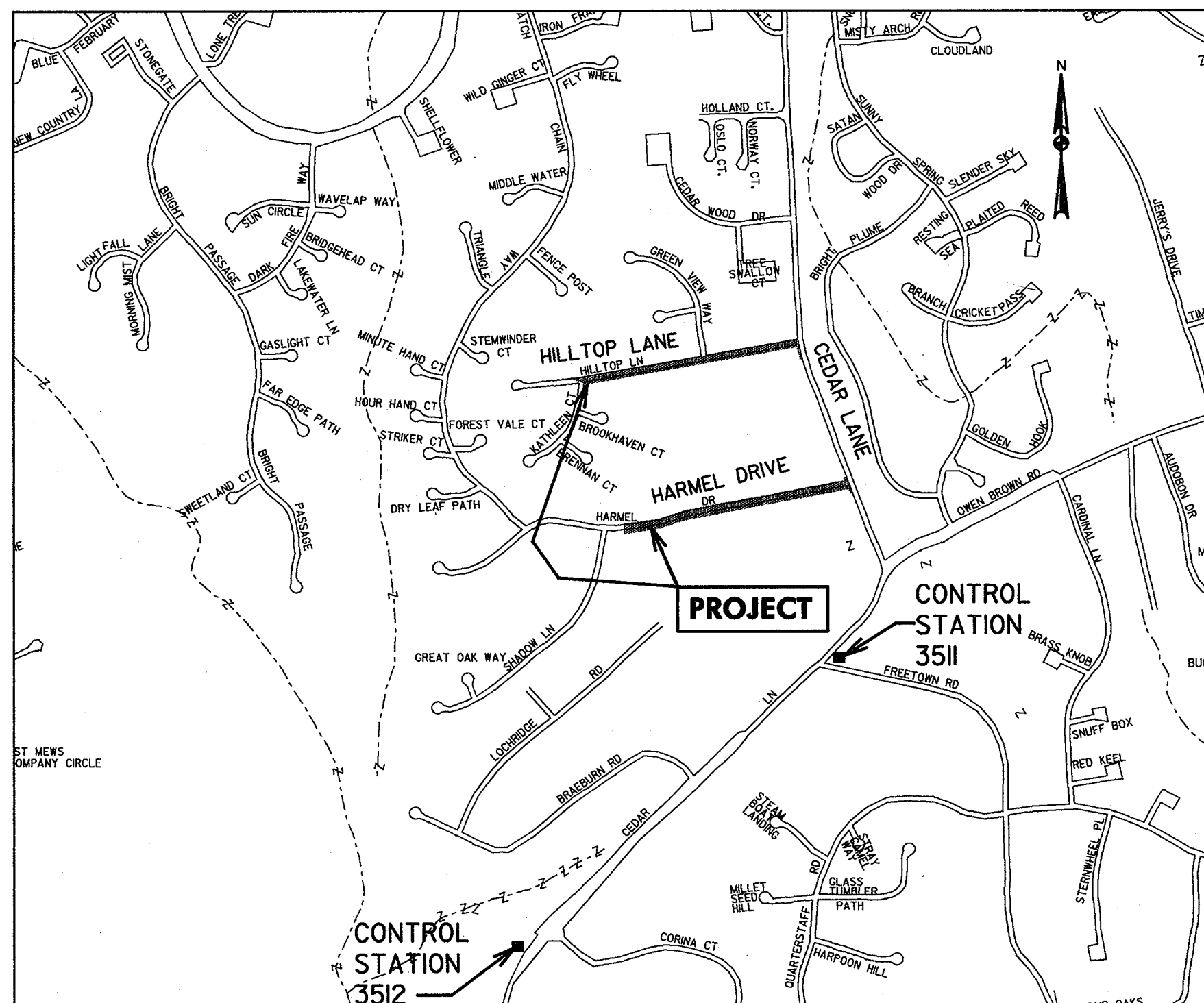
INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|-----------|---|
| 1 | TITLE SHEET |
| 2 | TYPICAL SECTIONS |
| 3 | TYPICAL SECTIONS |
| 4 | ROADWAY PLAN - HILLTOP LANE |
| 5 | ROADWAY PLAN - HILLTOP LANE |
| 6 | ROADWAY PLAN - HARMEL DRIVE |
| 7 | ROADWAY PLAN - HARMEL DRIVE |
| 8 | STORM DRAIN PROFILES - HILLTOP LANE & HARMEL DRIVE |
| 9 | MAINTENANCE OF TRAFFIC PLAN - HILLTOP LANE & HARMEL DRIVE |
| 10 | SEDIMENT AND EROSION CONTROL PLAN HILLTOP LANE |
| 11 | SEDIMENT AND EROSION CONTROL PLAN HARMEL DRIVE |
| 12 | SEDIMENT CONTROL NOTES AND DETAILS |
| 13 | SEDIMENT CONTROL NOTES AND DETAILS |
| 14 | SEDIMENT CONTROL NOTES AND DETAILS |

GENERAL NOTES

- ALL INFORMATION AND DETAILS SHALL BE CONSTRUCTED AS PER PLAN OR AS DIRECTED BY THE HOWARD COUNTY ENGINEER.
- ALL STATIONING AND DIMENSIONING ARE TO BE FIELD VERIFIED BY CONTRACTOR.
- STORM DRAINAGE SLOPES ARE TO BE AS DIRECTED BY HOWARD COUNTY ENGINEER UNLESS OTHERWISE SHOWN ON PLANS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
MISS UTILITY 1-800-257-7777
BGE 410-265-4689
HOWARD CO. CONSTRUCTION INSPECTION DIVISION
VERIZON
COMCAST CABLE
- THE CONTRACTOR SHALL CONTACT THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION OF THE BUREAU OF ENGINEERING FOR VERIFICATION AND/OR INFORMATION REGARDING:
 - PROPOSED/EXISTING RIGHT-OF-WAY.
 - UTILITY RELOCATION.
 - MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.
 - EROSION/SEDIMENT CONTROL CERTIFICATION AND PERMIT
 - HORIZONTAL/VERTICAL SURVEY CONTROL.
- UNDER NO CIRCUMSTANCES SHOULD THE EQUIPMENT MAINTAIN LESS THAN A FIFTEEN (15) FEET CLEARANCE FROM ANY TRANSMISSION WIRES OR LESS THAN A TEN (10) FEET CLEARANCE FROM ANY OTHER OVERHEAD ELECTRIC WIRES. THE CONTRACTOR SHALL ALSO ADHERE TO THE APPLICABLE PROVISIONS OF THE HIGH VOLTAGE LINE ACT, MARYLAND CODE ARTICLE 89 SECTIONS 58 THROUGH 62, AND THE OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS, TITLE 29 CFR, PARTS 1910 AND 1926.
- SEE HOWARD COUNTY STANDARD DETAILS NO'S G-1.01 & G-1.02 FOR STANDARD SYMBOLS.
- COORDINATES BASED ON NAD 83/1991 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3511 AND NO. 3512.

| | |
|------|--|
| 3511 | N, 557,110.365 E, 1,344,893.672 ELEV. 400.756 (NGVD29) |
| 3512 | N, 555,100.812 E, 1,342,733.109 ELEV. 330.428 (NGVD29) |
- A STAGING AND STOCKPILE AREA, WITH SEDIMENT CONTROL, WILL BE DETERMINED BY CONTRACTOR AND APPROVED BY HOWARD COUNTY ENGINEER.
- TOPOGRAPHIC SURVEY INFORMATION BASED ON FIELD SURVEY PERFORMED BY DEWBERRY & DAVIS DATED 6/28/00.



LOCATION MAP
SCALE: 1"=300'

**CAPITAL PROJECT NO. J-4092
HILLTOP LANE
& HARMEL DRIVE
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS**

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 U.S. Natural Resource Conservation Service
 Date: 1/22/02

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Howard Soil Conservation District
 Date: 1/22/02

APPROVED FOR STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION
 Date: _____

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

Signature: _____ PE No. _____
 Date: _____

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Signature: _____ DATE: 1/15/02
 CHIEF, BUREAU OF ENGINEERING

Signature: _____ DATE: 1/22/02
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis LLC
 A Dewberry & Davis Company
 3120 Timanus Lane, Suite #211
 Baltimore, Maryland 21244
 (410) 265-9500 FAX(410) 265-8875

Engineers
 Planners
 Surveyors
 Landscape Architects



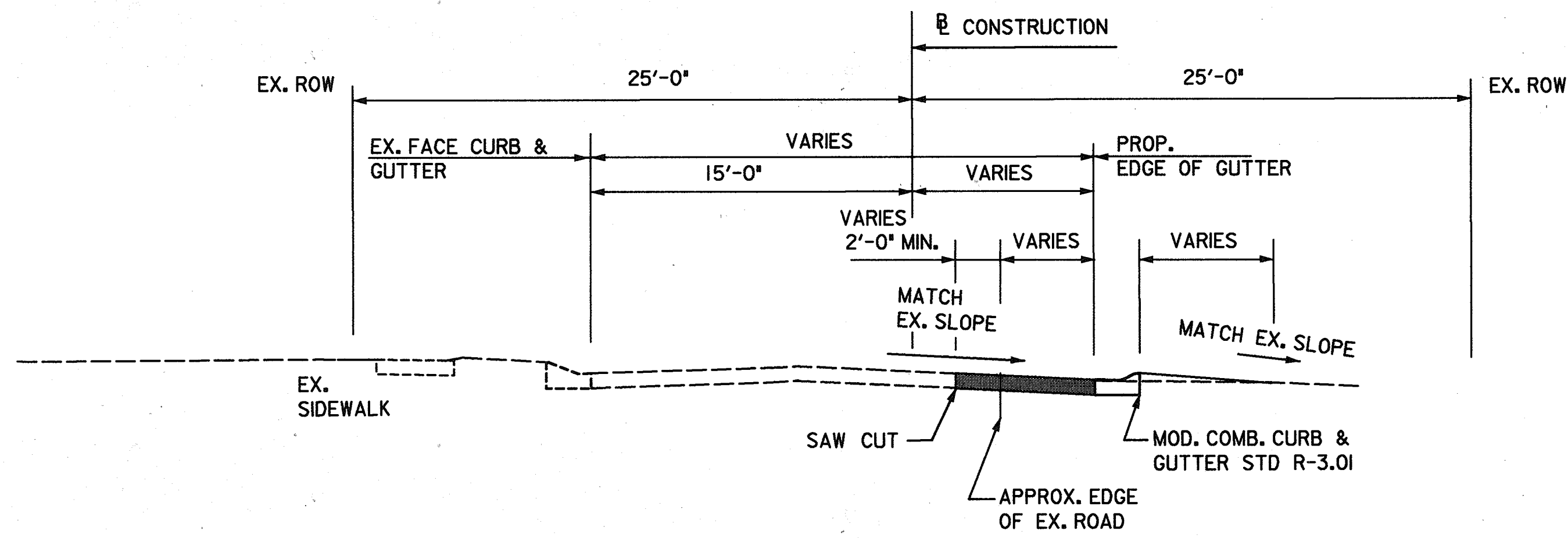
| | | | | | |
|-------|----|-----|----------|------|--|
| DES: | | | | | |
| DRN: | | | | | |
| CHK: | | | | | |
| DATE: | BY | NO. | REVISION | DATE | |

CAPITAL PROJECT NO.
 J-4092

NO.: _____ DATE: _____

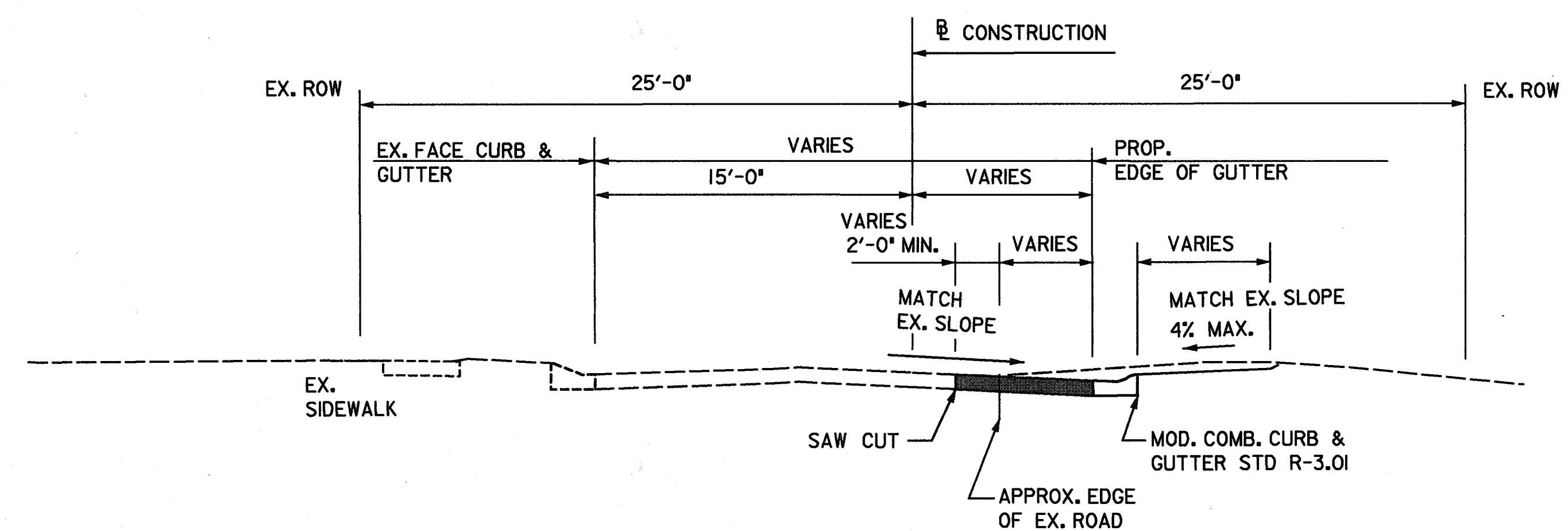
TITLE SHEET

SHEET
1 OF 14



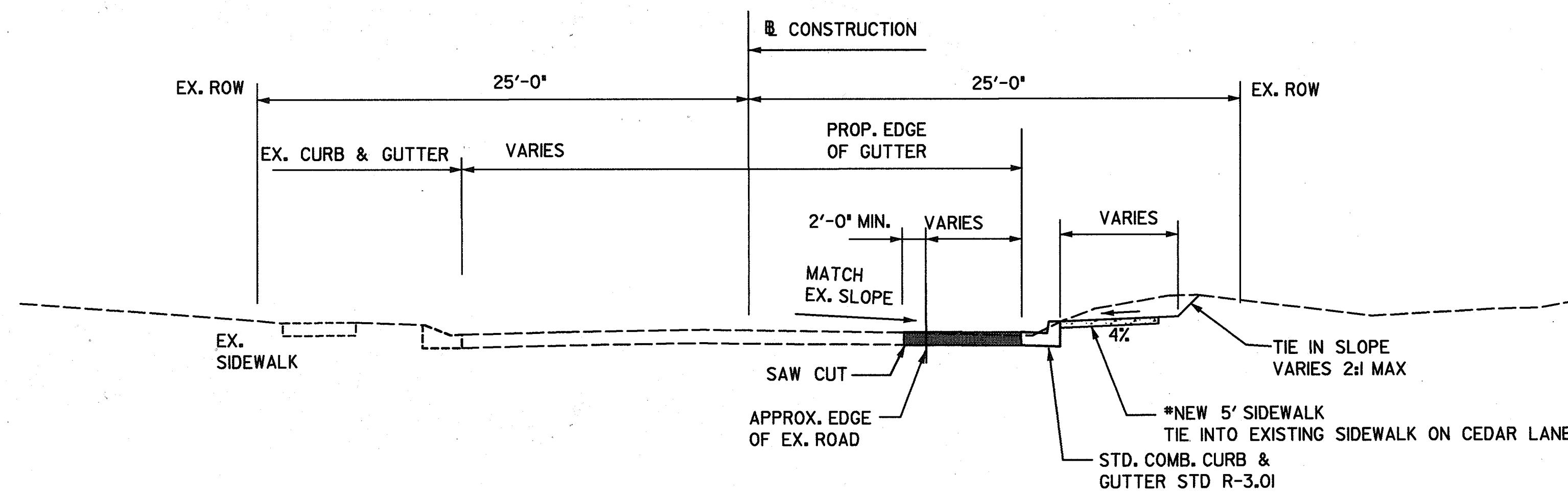
HILLTOP LANE

STA. 107+24 TO STA. 116+75
 STA. 117+50 TO STA. 118+25



HILLTOP LANE

STA. 116+75 TO STA. 117+50
 STA. 118+25 TO STA. 119+01.4
 (BETWEEN STA. 118+34.8 TO STA. 118+79.4 TRANSITION AS SHOWN IN ROADWAY TABLE)
 (BETWEEN STATION 119+01.4 TO 119+11.4 TRANSITION CURB FROM MOD. COMB. CURB AND GUTTER TO STD. COMB. CURB AND GUTTER.)



HILLTOP LANE

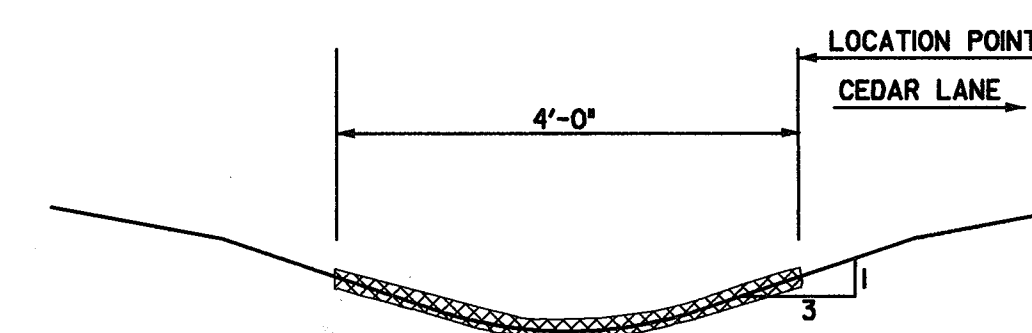
STA. 119+11.4 TO STA. 119+78.4

ROADWAY WIDTH TRANSITION TABLE

| STATION | OFFSET | TOTAL WIDTH | COMMENTS |
|-----------|------------|-------------|-------------------------------|
| 107+24.06 | 14.24' RT. | 29.49' | BEGIN NEW PAVEMENT |
| 108+25.00 | 8.07' RT. | 23.42' | POT |
| 118+34.80 | 8.07' RT. | 23.17' | *PC R=50' |
| 118+57.11 | 13.33' RT. | 28.42' | *PRC R=50' |
| 118+79.43 | 18.60' RT. | 33.92' | *PT R=50' |
| 119+01.43 | 18.62' RT. | 34.55' | BEGIN TRANS. TO VERTICAL CURB |
| 119+50.20 | 20.28' RT. | 35.28' | BEGIN SIDEWALK |
| 119+78.41 | 50.51' RT. | 83.03' | END NEW PAVEMENT |

*SEE CURVE DATA ON SHEET 5

PAVING SECTION
 P-2 - FULL DEPTH BITUMINOUS CONCRETE
 ALTERNATE - SEE STD R-2.0I



SOIL STABILIZATION MATTING DETAIL

NOT TO SCALE

SOIL STABILIZATION MATTING TABLE

| *STATION | **OFFSET |
|----------|------------|
| 307+43 | 26.52' RT. |
| 307+65 | 33.33' RT. |
| 307+88 | 37.24' RT. |
| 308+23 | 38.83' RT. |
| 308+39 | 40.49' RT. |

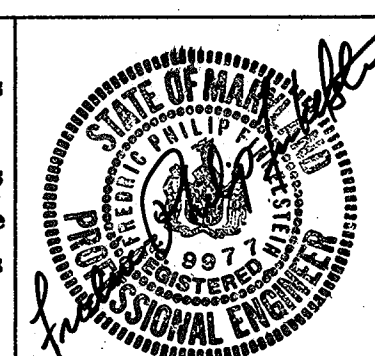
*STATIONS GIVEN FOR CEDAR LANE ALIGNMENT
 **OFFSET MEASURED TO CEDAR LANE SIDE OF MATTING

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James D. Nelson 1/15/02
 DEPARTMENT OF PUBLIC WORKS DATE
 CHIEF, BUREAU OF ENGINEERING

Robert J. Spon 1/15/02
 DEPARTMENT OF PUBLIC WORKS DATE
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis LLC Engineers
 A Dewberry & Davis Company
 3120 Timanus Lane, Suite #211
 Baltimore, Maryland 21244
 (410) 265-9500 FAX (410) 265-8875
 Planners
 Surveyors
 Landscape
 Architects



| | | | | |
|-------|----|-----|----------|------|
| DES: | | | | |
| DRN: | | | | |
| CHK: | | | | |
| DATE: | BY | NO. | REVISION | DATE |

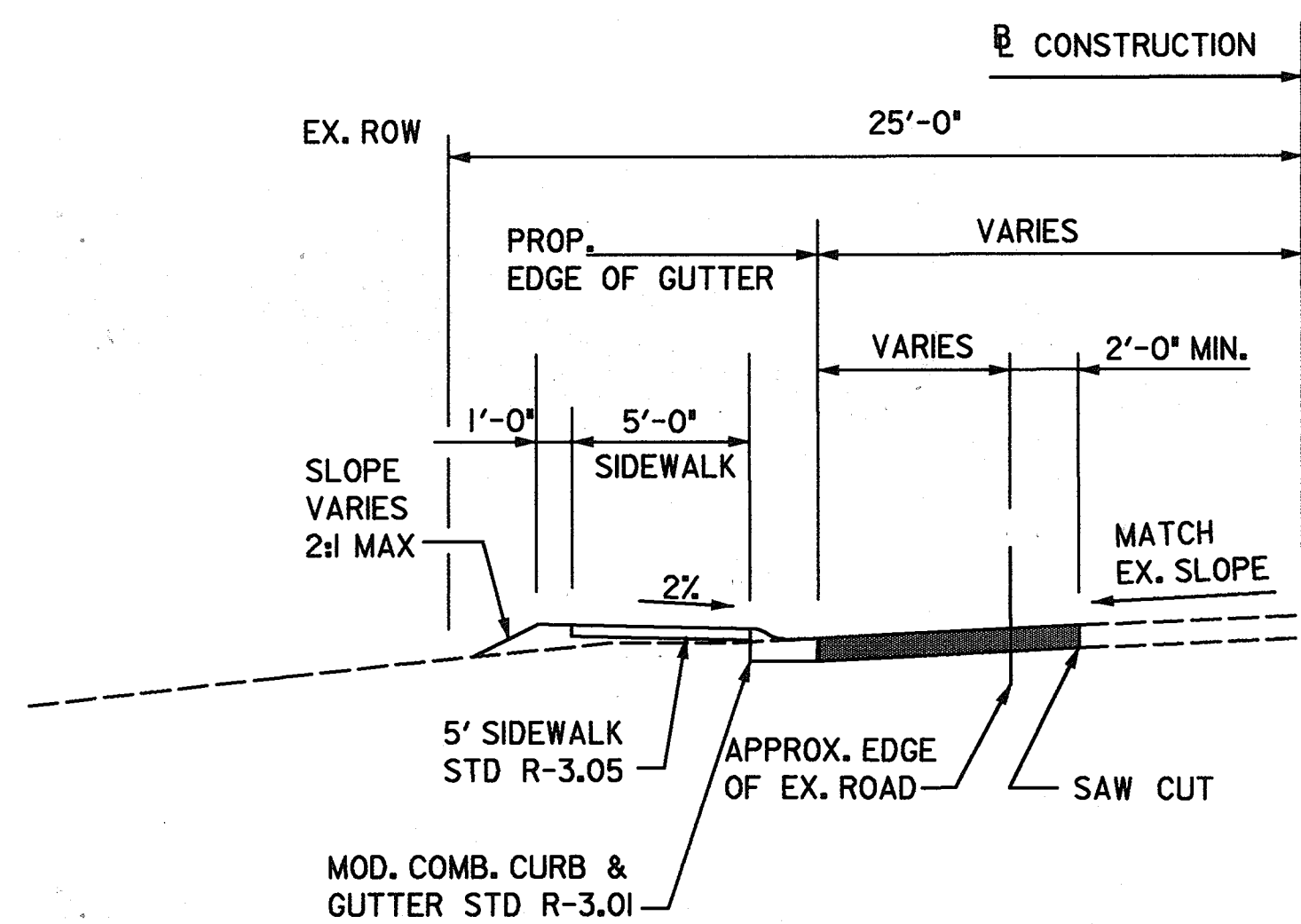
CAPITAL PROJECT NO.
 J-4092

30' SCALE MAP NO.: _____ DATE: _____

TYPICAL SECTIONS
HILLTOP LANE

SCALE:
 1"=30'

SHEET
 2 OF 14



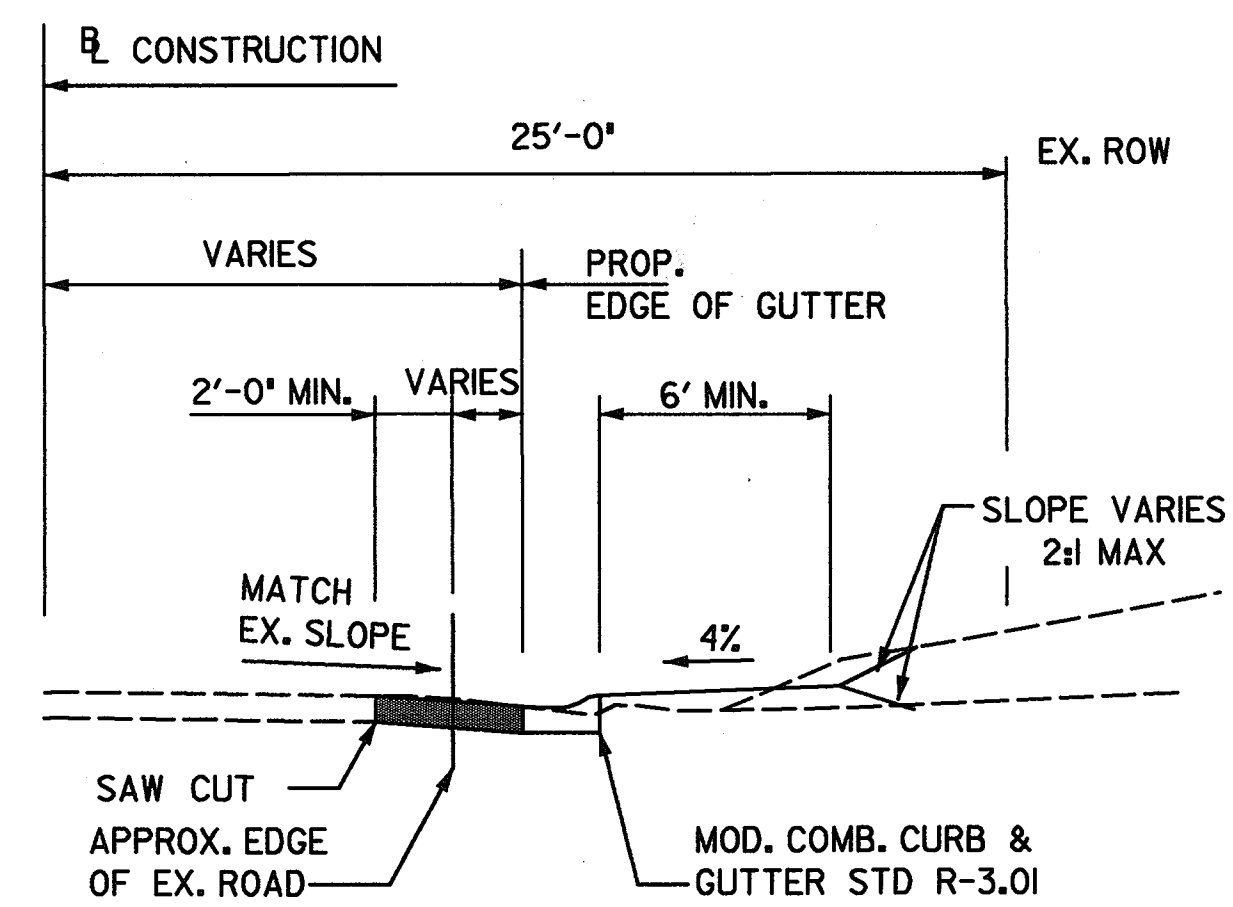
HARMEL DRIVE

STA. 203+22 TO STA. 218+72

LEFT ROADWAY WIDTH TRANSITION TABLE

| STATION | *OFFSET | COMMENTS |
|-----------|------------|---|
| 201+59.0 | 16.52' LT. | BEGIN NEW SIDEWALK** |
| 203+21.0 | 14.66' LT. | BEGIN NEW ROADWAY PAVEMENT |
| 204+50.0 | 12.10' LT. | END ROADWAY TRANSITION |
| 218+18.31 | 12.10' LT. | TRANSITION TO VERTICAL CURB HOWARD COUNTY STD. R-3.01 |
| 218+41.96 | 12.00' LT. | PC R=31.0' - CONTINUE WITH HOWARD COUNTY STD. R-3.01 |
| 218+72.6 | 47.72' LT. | PT R=31.0' - CONTINUE WITH HOWARD COUNTY STD. R-3.01 |

*OFFSET MEASURED FROM BASELINE TO EDGE OF THE GUTTER
 **SIDEWALK CONTINUES TO STATION 218+72.6 MEETING EXISTING SIDEWALK ON CEDAR LANE



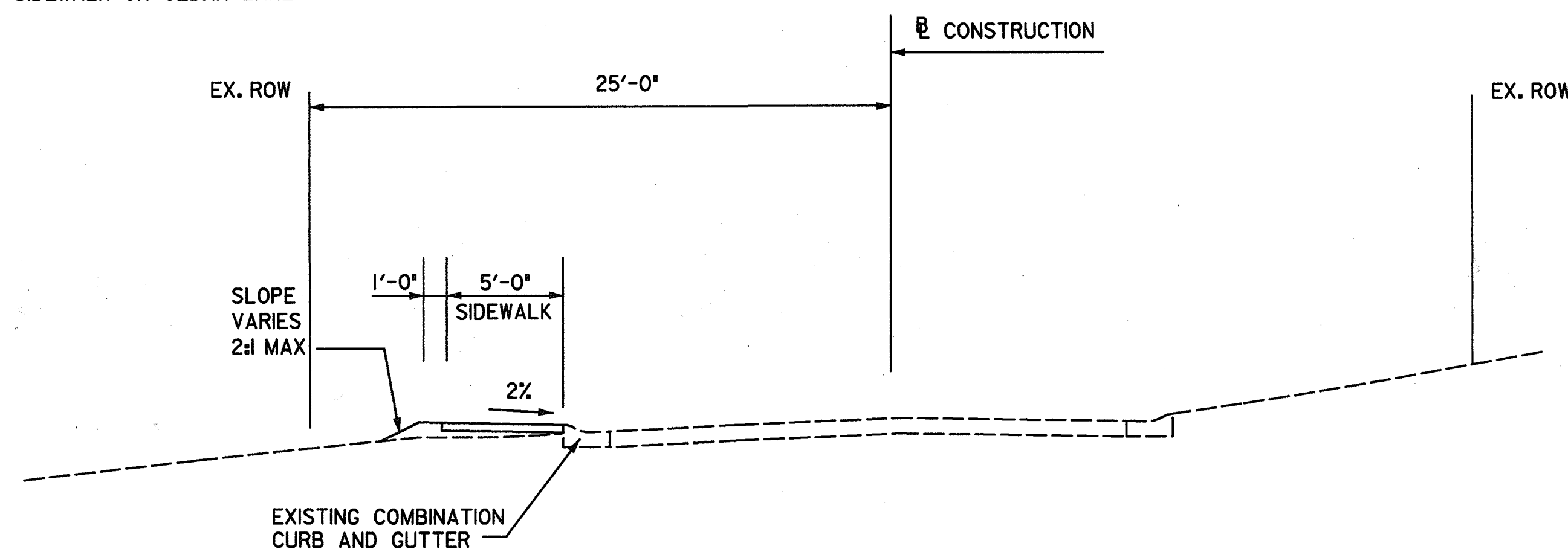
HARMEL DRIVE

STA. 203+24 TO STA. 218+84

RIGHT ROADWAY WIDTH TRANSITION TABLE

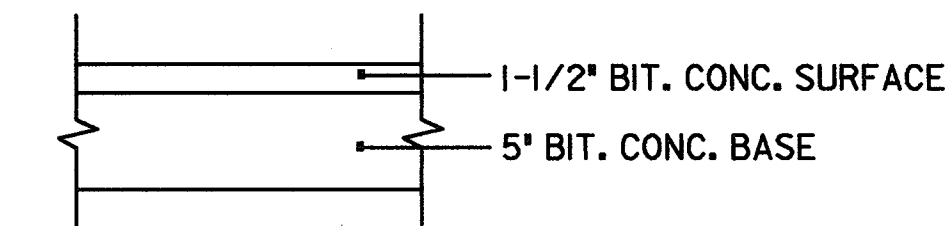
| STATION | *OFFSET | COMMENTS |
|-----------|------------|---|
| 203+23.9 | 13.49' RT. | BEGIN NEW ROADWAY PAVEMENT |
| 204+50.0 | 10.10' RT. | END ROADWAY TRANSITION |
| 218+18.5 | 10.10' RT. | TRANSITION TO VERTICAL CURB HOWARD COUNTY STD. R-3.01 |
| 218+41.96 | 10.00' RT. | PC R=31.0' - CONTINUE WITH HOWARD COUNTY STD. R-3.01 |
| 218+83.85 | 36.64' RT. | PT R=31.0' - CONTINUE WITH HOWARD COUNTY STD. R-3.01 |

*OFFSET MEASURED FROM BASELINE TO EDGE OF THE GUTTER



HARMEL DRIVE

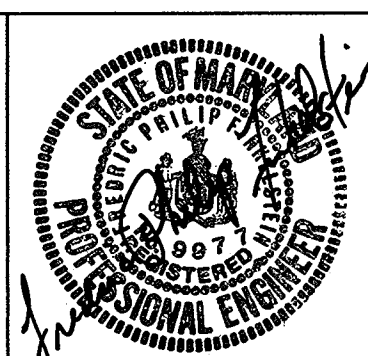
STA. 201+59 TO STA. 203+21



PAVING SECTION
 P-2 - FULL DEPTH BIT. CON. ALTERNATE
 SEE STD R-2.01

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE: 1/15/02
 DATE: 4/15/02

Dewberry & Davis LLC
 A Dewberry & Davis Company
 3120 Timanus Lane, Suite #211
 Baltimore, Maryland 21244
 (410) 265-9500 FAX (410) 265-8875
 Engineers, Planners, Surveyors, Landscape Architects



| | | | | |
|-------|----|-----|----------|------|
| DES: | | | | |
| DRN: | | | | |
| CHK: | | | | |
| DATE: | BY | NO. | REVISION | DATE |

CAPITAL PROJECT NO.
 J-4092
 30' SCALE MAP NO.: _____ DATE: _____

TYPICAL SECTIONS
HARMEL DRIVE
 SCALE: 1"=30'
 SHEET 3 OF 14

| HILLTOP LANE - CONSTRUCTION POINTS | | | |
|------------------------------------|------------|-----------|--------------------------------|
| STATION | OFFSET | ELEVATION | ITEM |
| 107+24.06 | 14.24' RT. | 417.23 | POT-HILLTOP L.A. MODIFIED CURB |
| 108+25.00 | 8.07' RT. | 421.08 | POT-HILLTOP L.A. MODIFIED CURB |
| 112+00.00 | 8.07' RT. | 430.71 | POT-HILLTOP L.A. MODIFIED CURB |

| RESIDENTIAL DRIVEWAY - STD. NO. R-6.05 | | |
|--|-------|----------|
| STATION | SIDE | QTY (SY) |
| 107+59 | RIGHT | 30.4 |
| 108+51 | RIGHT | 30.4 |
| 109+84 | RIGHT | 22.6 |
| 110+36 | RIGHT | 27.6 |
| 110+56 | RIGHT | 22.6 |
| 111+52 | RIGHT | 22.8 |

| MODIFIED COMBINATION CURB AND GUTTER STD. NO. R-3.01 | |
|--|----------|
| STA. 104+65.68, 43.9' RT. TO STA. 112+00.00, 8.07' RT. | 752 L.F. |

| ALIGNMENT POINTS | | | |
|--------------------|-----------|------------|--------------|
| POINT | STATION | NORTH | EAST |
| POT - HILLTOP L.A. | 103+74.78 | 558,995.76 | 1,343,107.91 |
| POT - HILLTOP L.A. | 104+49.47 | 559,010.72 | 1,343,181.09 |
| POT - HILLTOP L.A. | 109+00.00 | 559,100.94 | 1,343,622.49 |

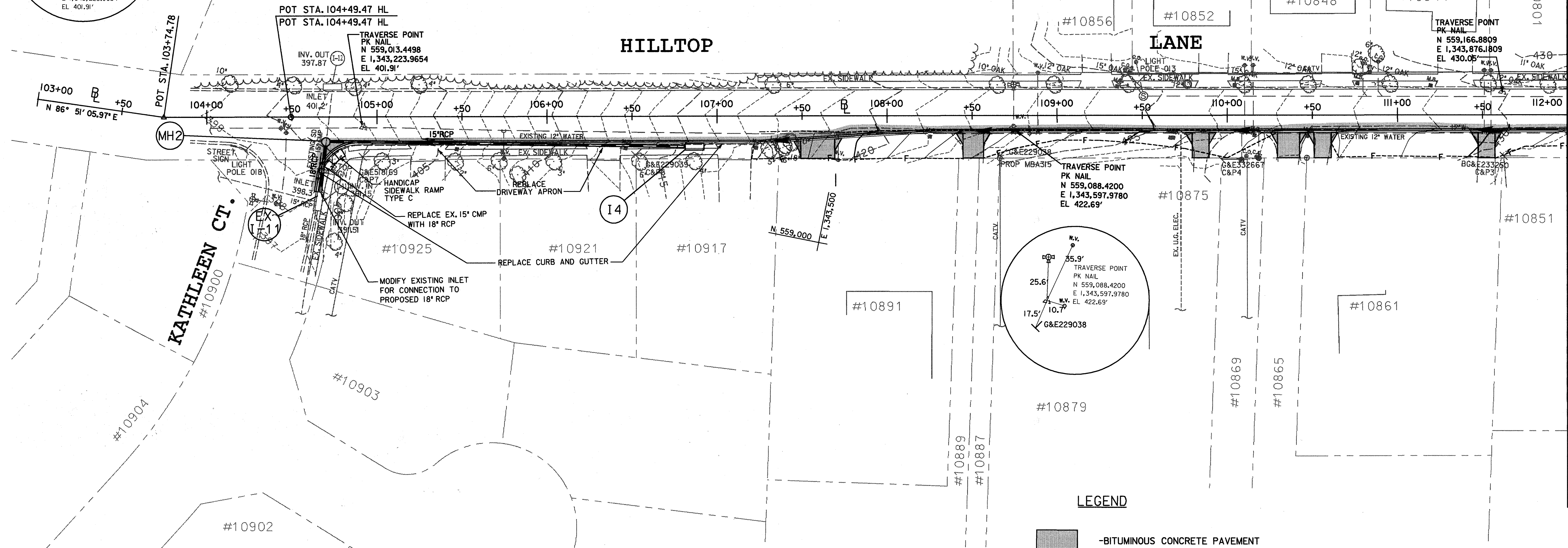
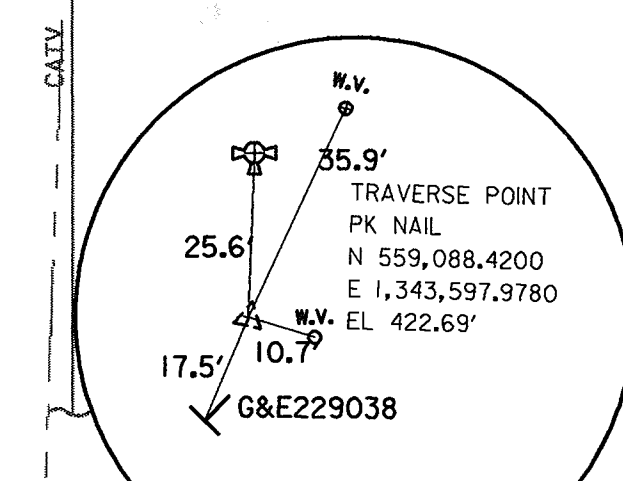
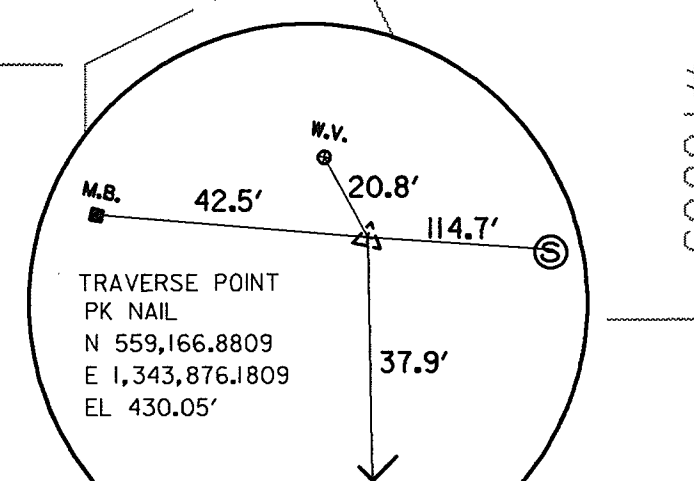
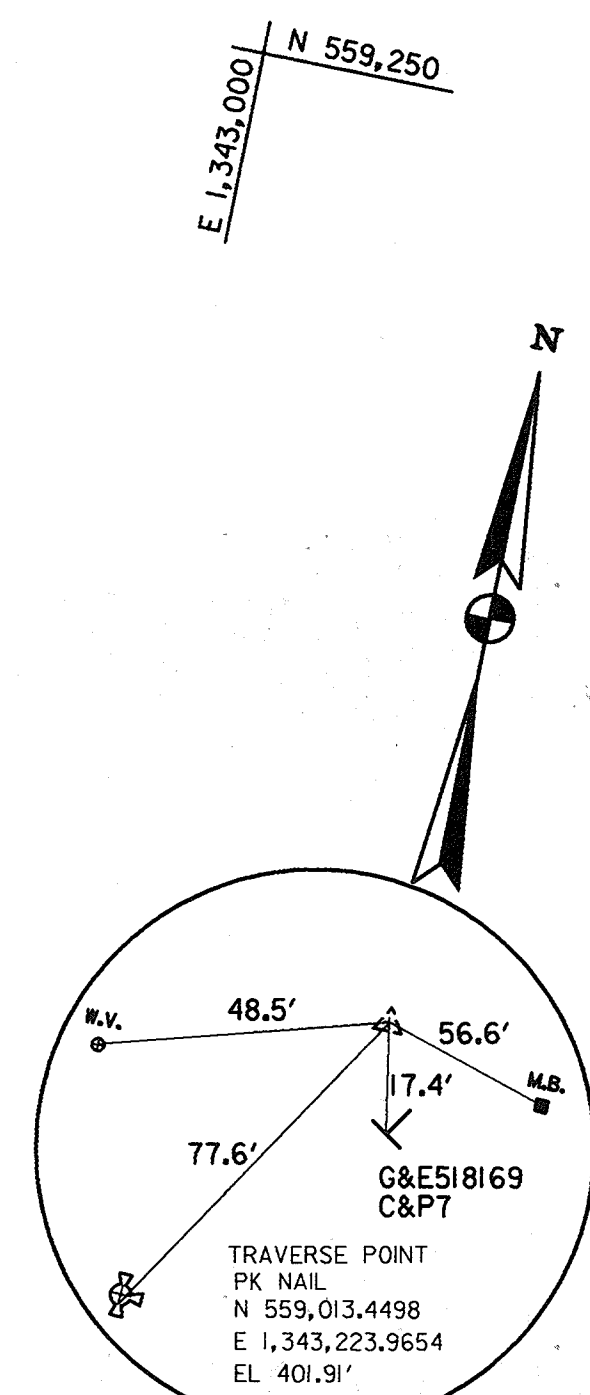
| HANDICAP SIDEWALK RAMP TYPE C STD. NO. R-4.03 | |
|---|-------|
| STA. 107+74.50, 20.00' RT. HILLTOP LANE | 1 EA. |

| DRAINAGE PIPE SCHEDULE | | | | | |
|------------------------|------|------------|--------|-----------|------------|
| STRUCTURE TO STRUCTURE | SIZE | TYPE | LENGTH | INVERT IN | INVERT OUT |
| I-4-MH2 | 18" | CL IV RCCP | 27' | 396.40 | 395.20 |
| MH2-EX. I-11 | 15" | CL IV RCCP | 209' | 410.20 | 396.70 |

| DRAINAGE STRUCTURE SCHEDULE | | | | | |
|-----------------------------|-----------|-----------|-----------------------|------------|---------------------|
| STRUCTURE NUMBER | STATION | OFFSET | ELEVATION TOP OF STR. | STRUCTURE | HOWARD CO. STD. NO. |
| I-4 | 106+86.83 | 15.94 RT. | 415.60 | A-10 INLET | SD 4.02 |
| MH2 | 104+69.99 | 14.58 RT. | 400.30 | STD MH | G 5.01 |

**OFFSET IS GIVEN TO CENTER OF STRUCTURE AT THE FACE OF THE PROPOSED CURB UNLESS OTHERWISE NOTED
 **OFFSET AND ELEVATION IS GIVEN TO CENTER OF STRUCTURE

- CONSTRUCTION NOTES:**
- ALL MAILBOXES ARE TO BE RESET.
 - ALL REPLACED DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
 - ALL MEASUREMENTS TAKEN TO EDGE OF GUTTER UNLESS OTHERWISE NOTED.
 - CURB TRANSITIONS AT PROPOSED INLETS ARE TO BE CONSTRUCTED PER HOWARD CO. STANDARD R-3.06.



LEGEND

- BITUMINOUS CONCRETE PAVEMENT
- CONCRETE CURB AND GUTTER
- PROPOSED STORM DRAIN PIPE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Camille J. ... 1/15/02
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

Robert M. ... 1-17-02
 CHIEF, BUREAU OF ENGINEERS

Robert M. ... 1-17-02
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis LLC
 A Dewberry & Davis Company
 3120 Timanus Lane, Suite #211
 Baltimore, Maryland 21244
 (410) 265-9500 FAX(410) 265-8875

Engineers
 Planners
 Surveyors
 Landscape
 Architects



| | |
|----------|------|
| DES: | |
| DRN: | |
| CHK: | |
| DATE: | |
| BY | NO. |
| REVISION | DATE |

CAPITAL PROJECT NO.
 J-4092

30' SCALE MAP NO.: _____ DATE: _____

ROADWAY PLAN
HILLTOP LANE

SCALE:
 1"=30'

SHEET
 4 OF 14

MATCH LINE STA. 112+00 - SEE SHEET 5 OF 14

MATCH LINE STA. 112+00 SEE SHEET 5 OF 14

| HILLTOP LANE - CONSTRUCTION POINTS | | | |
|------------------------------------|------------|-----------|----------------------------------|
| STATION | OFFSET | ELEVATION | ITEM |
| 112+00.00 | 8.07' RT. | 430.71 | POT-HILLTOP L.A. MODIFIED CURB |
| 118+34.80 | 8.07' RT. | 418.82 | POT-HILLTOP L.A. PC-CURB ** |
| 118+57.12 | 13.33' RT. | 417.98 | POT-HILLTOP L.A. PRC-CURB ** |
| 118+79.43 | 18.60' RT. | 417.17 | POT-HILLTOP L.A. RT-CURB ** |
| 119+01.43 | 19.50' RT. | 414.32 | POT-HILLTOP L.A. CURB TRANSITION |
| 119+50.26 | 19.62' RT. | 411.26 | POT-HILLTOP L.A. PC-CURB |
| 119+78.41 | 50.51' RT. | 410.09 | POT-HILLTOP L.A. CURB TIE-IN |

**OFFSET MEASURED TO FACE OF CURB
**TURN LANE TRANSITION

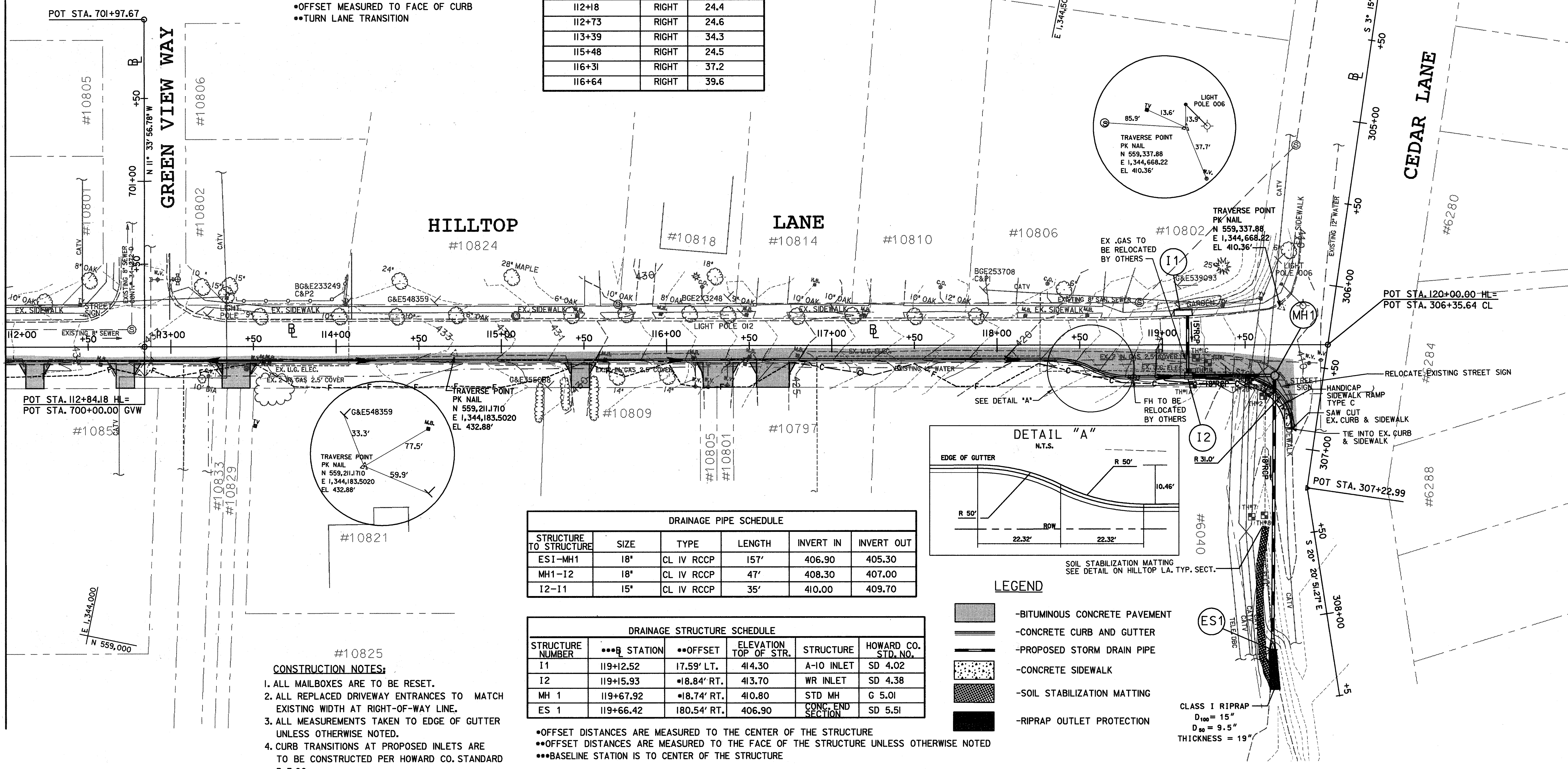
| HANDICAP SIDEWALK RAMP TYPE C STD. NO. R-4.03 | | |
|---|------------|--------------------|
| STA. 116+64.00, | 25.00' RT. | HILLTOP LANE 1 EA. |

| STANDARD COMBINATION CURB AND GUTTER STD. NO. R-3.01 | | |
|--|-------------------------------|--------------------|
| STA. 119+18.38, | 19.61' RT. TO STA. 119+78.41, | 50.51' RT. 89 L.F. |

| MODIFIED COMBINATION CURB AND GUTTER STD. NO. R-3.01 | | |
|--|------------------------------|---------------------|
| STA. 112+00.00, | 8.97' RT. TO STA. 118+99.43, | 19.50' RT. 715 L.F. |

| CONCRETE SIDEWALK STD. NO. R-3.05 | | |
|-----------------------------------|-------------------------------|---------------------|
| STA. 119+50.26, | 20.29' RT. TO STA. 119+78.41, | 50.51' RT. 181 S.F. |

| RESIDENTIAL DRIVEWAY - STD. NO. 6.05 | | |
|--------------------------------------|-------|----------|
| STATION | SIDE | QTY (SY) |
| 112+18 | RIGHT | 24.4 |
| 112+73 | RIGHT | 24.6 |
| 113+39 | RIGHT | 34.3 |
| 115+48 | RIGHT | 24.5 |
| 116+31 | RIGHT | 37.2 |
| 116+64 | RIGHT | 39.6 |

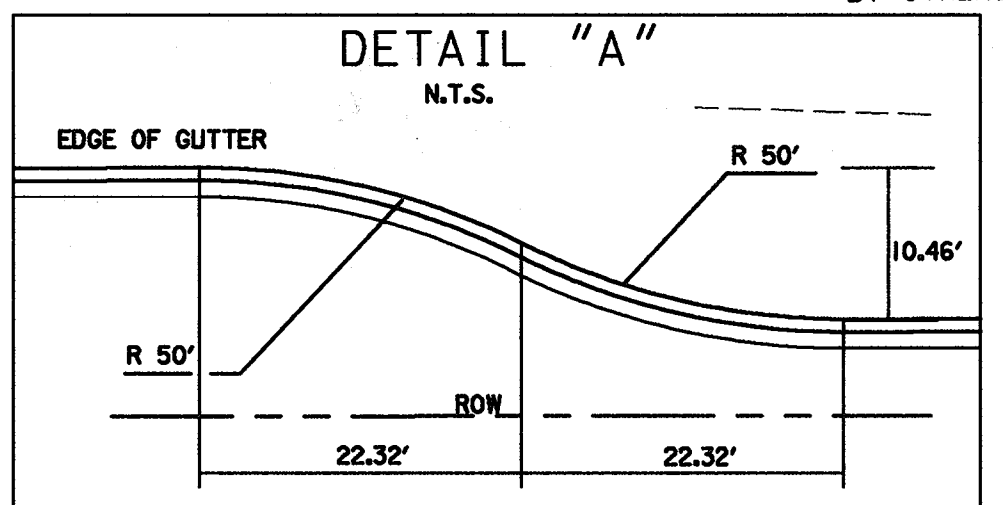


- CONSTRUCTION NOTES:**
- ALL MAILBOXES ARE TO BE RESET.
 - ALL REPLACED DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
 - ALL MEASUREMENTS TAKEN TO EDGE OF GUTTER UNLESS OTHERWISE NOTED.
 - CURB TRANSITIONS AT PROPOSED INLETS ARE TO BE CONSTRUCTED PER HOWARD CO. STANDARD R-3.06.

| DRAINAGE PIPE SCHEDULE | | | | | |
|------------------------|------|------------|--------|-----------|------------|
| STRUCTURE TO STRUCTURE | SIZE | TYPE | LENGTH | INVERT IN | INVERT OUT |
| ESI-MH1 | 18" | CL IV RCCP | 157' | 406.90 | 405.30 |
| MH1-I2 | 18" | CL IV RCCP | 47' | 408.30 | 407.00 |
| I2-I1 | 15" | CL IV RCCP | 35' | 410.00 | 409.70 |

| DRAINAGE STRUCTURE SCHEDULE | | | | | |
|-----------------------------|-----------|-------------|-----------------------|-------------------|---------------------|
| STRUCTURE NUMBER | STATION | OFFSET | ELEVATION TOP OF STR. | STRUCTURE | HOWARD CO. STD. NO. |
| I1 | 119+12.52 | 17.59' LT. | 414.30 | A-10 INLET | SD 4.02 |
| I2 | 119+15.93 | 18.84' RT. | 413.70 | WR INLET | SD 4.38 |
| MH 1 | 119+67.92 | 18.74' RT. | 410.80 | STD MH | G 5.01 |
| ES 1 | 119+66.42 | 180.54' RT. | 406.90 | CONC. END SECTION | SD 5.51 |

**OFFSET DISTANCES ARE MEASURED TO THE CENTER OF THE STRUCTURE
**OFFSET DISTANCES ARE MEASURED TO THE FACE OF THE STRUCTURE UNLESS OTHERWISE NOTED
***BASELINE STATION IS TO CENTER OF THE STRUCTURE



- LEGEND**
- BITUMINOUS CONCRETE PAVEMENT
 - CONCRETE CURB AND GUTTER
 - PROPOSED STORM DRAIN PIPE
 - CONCRETE SIDEWALK
 - SOIL STABILIZATION MATTING
 - RIPRAP OUTLET PROTECTION

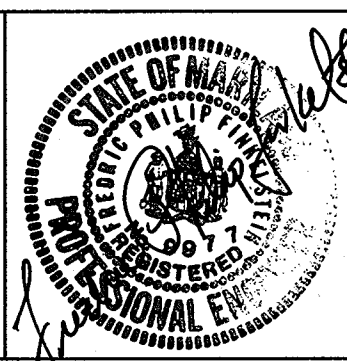
CLASS I RIPRAP
D₁₀₀ = 15"
D₆₀ = 9.5"
THICKNESS = 19"

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signatures]
DATE: 1/15/02
DATE: 1-17-02

Dewberry & Davis LLC
A Dewberry & Davis Company
3120 Timanus Lane, Suite #211
Baltimore, Maryland 21244
(410) 265-9500 FAX(410) 265-8875

Engineers
Planners
Surveyors
Landscape
Architects



| DES: | DRN: | CHK: | DATE: | BY: | NO. | REVISION | DATE: |
|------|------|------|-------|-----|-----|----------|-------|
| | | | | | | | |

CAPITAL PROJECT NO.
J-4092

30' SCALE MAP NO.: _____ DATE: _____

ROADWAY PLAN
HILLTOP LANE

SCALE: 1"=30'
SHEET 5 OF 14

| MODIFIED COMBINATION CURB AND GUTTER STD. NO. R-3.01 | |
|---|--|
| STA. 203+23.90, 13.83' RT. TO STA. 210+75.00, 13.00' RT. 749 L.F. | |
| STA. 203+26.33, 15.58' LT. TO STA. 210+75.00, 11.00' LT. 751 L.F. | |

| HANDICAP SIDEWALK RAMP TYPE C STD. NO. R-4.03 | |
|---|--|
| STA. 201+77.5, 15.02' LT. HARMEL DRIVE I EA. | |

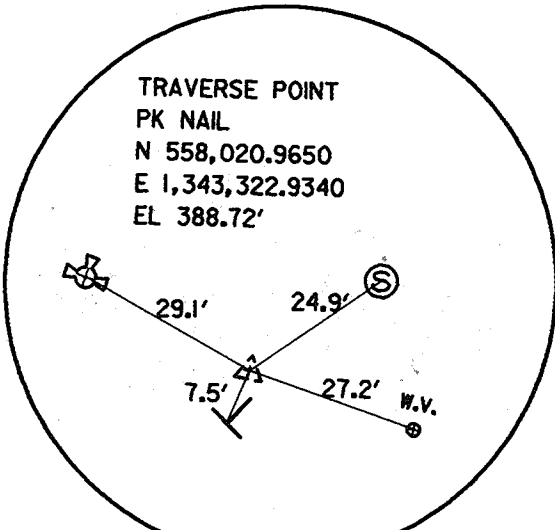
| HILLTOP LANE - CONSTRUCTION POINTS | | | |
|------------------------------------|------------|-----------|-----------------------------------|
| STATION | OFFSET | ELEVATION | ITEM |
| 203+22.19 | 16.68' LT. | 393.68 | POT - HARMEL DR. FACE OF SIDEWALK |
| 203+23.89 | 13.05' RT. | 393.61 | POT - HARMEL DR. EDGE OF GUTTER |
| 203+26.33 | 14.66' LT. | 393.63 | POT - HARMEL DR. EDGE OF GUTTER |
| 204+50.00 | 10.10' RT. | 396.08 | POT - HARMEL DR. EDGE OF GUTTER |
| 204+50.00 | 12.10' LT. | 396.04 | POT - HARMEL DR. EDGE OF GUTTER |

| ALIGNMENT POINTS | | | |
|------------------|-----------|------------|--------------|
| POINT | STATION | NORTH | EAST |
| PC - HARMEL DR. | 201+84.82 | 558,041.84 | 1,343,347.55 |
| PT - HARMEL DR. | 203+22.19 | 558,043.16 | 1,343,484.09 |
| POT - HARMEL DR. | 210+02.29 | 558,178.59 | 1,344,150.56 |
| POT - HARMEL DR. | 207+00.00 | 558,118.39 | 1,343,854.32 |

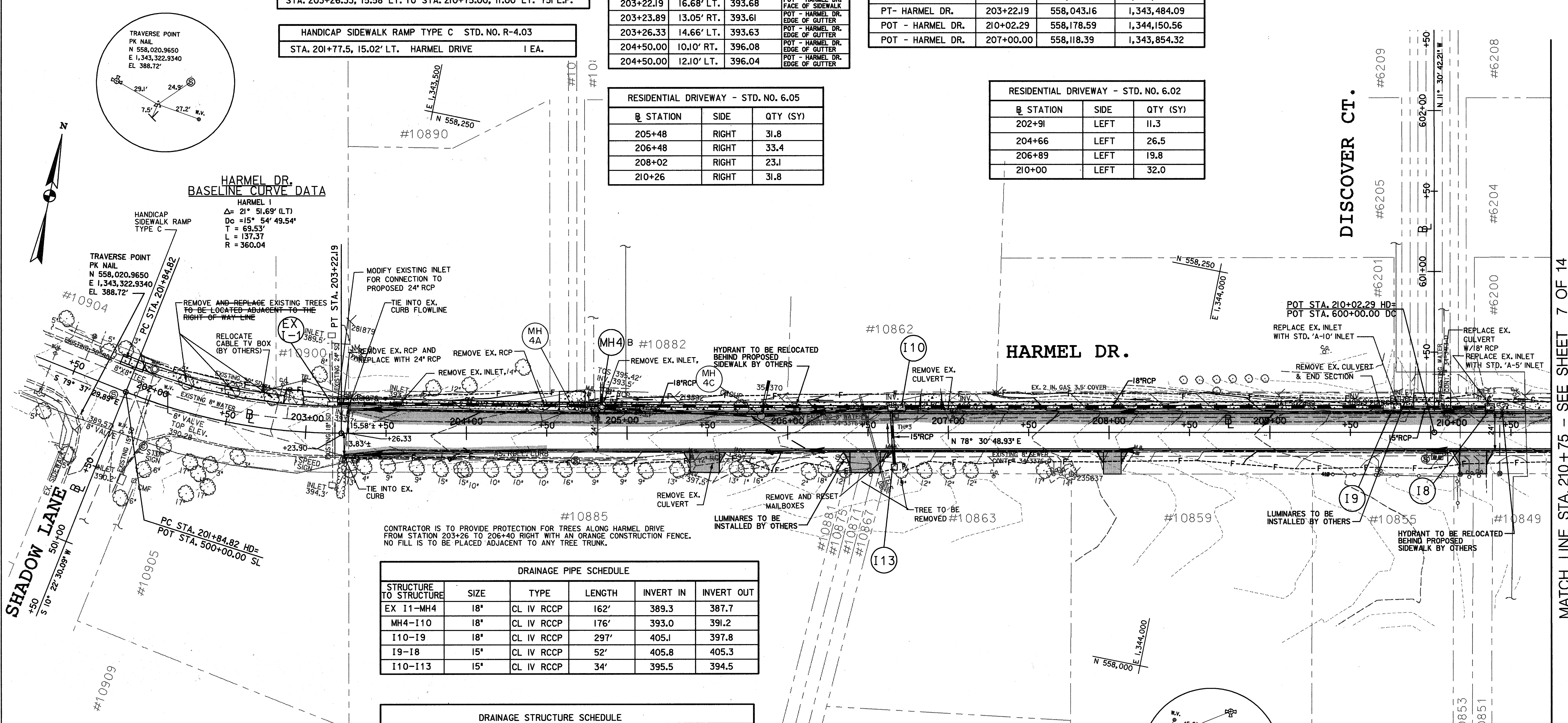
| CONCRETE SIDEWALK STD. NO. R-3.05 | |
|---|--|
| STA. 201+75.00, 16.45' LT. TO STA. 210+75.00, 11.00' LT. 3,426 S.F. | |

| RESIDENTIAL DRIVEWAY - STD. NO. 6.05 | | |
|--------------------------------------|-------|----------|
| STATION | SIDE | QTY (SY) |
| 205+48 | RIGHT | 31.8 |
| 206+48 | RIGHT | 33.4 |
| 208+02 | RIGHT | 23.1 |
| 210+26 | RIGHT | 31.8 |

| RESIDENTIAL DRIVEWAY - STD. NO. 6.02 | | |
|--------------------------------------|------|----------|
| STATION | SIDE | QTY (SY) |
| 202+91 | LEFT | 11.3 |
| 204+66 | LEFT | 26.5 |
| 206+89 | LEFT | 19.8 |
| 210+00 | LEFT | 32.0 |



HARMEL DR. BASELINE CURVE DATA
HARMEL I
Δ = 21° 51.69' (LT)
Dc = 15° 54' 49.54"
T = 69.53'
L = 137.37
R = 360.04



| DRAINAGE PIPE SCHEDULE | | | | | |
|------------------------|------|------------|--------|-----------|------------|
| STRUCTURE TO STRUCTURE | SIZE | TYPE | LENGTH | INVERT IN | INVERT OUT |
| EX I1-MH4 | 18" | CL IV RCCP | 162' | 389.3 | 387.7 |
| MH4-I10 | 18" | CL IV RCCP | 176' | 393.0 | 391.2 |
| I10-I9 | 18" | CL IV RCCP | 297' | 405.1 | 397.8 |
| I9-I8 | 15" | CL IV RCCP | 52' | 405.8 | 405.3 |
| I10-I13 | 15" | CL IV RCCP | 34' | 395.5 | 394.5 |

| DRAINAGE STRUCTURE SCHEDULE | | | | | |
|-----------------------------|-----------|-------------|-----------------------|------------|---------------------|
| STRUCTURE NUMBER | STATION | OFFSET | ELEVATION TOP OF STR. | STRUCTURE | HOWARD CO. STD. NO. |
| I8 | 210+36.76 | 13.44' LT. | 413.60 | A-5 INLET | SD 4.01 |
| I9 | 209+75.85 | 13.44' LT. | 412.30 | A-10 INLET | SD 4.02 |
| I10 | 206+67.93 | 13.44' LT. | 401.60 | A-10 INLET | SD 4.02 |
| I13 | 210+66.39 | *21.49' RT. | 401.00 | YARD INLET | SD 4.39 |
| MH4 | 204+84.38 | *17.08' LT. | 397.00 | STD MH | G 5.01 |

**OFFSET DISTANCES ARE MEASURED TO THE FACE OF THE STRUCTURE UNLESS OTHERWISE NOTED
*OFFSET AND ELEVATION IS GIVEN TO CENTER OF STRUCTURE

LEGEND

- BITUMINOUS CONCRETE PAVEMENT
- CONCRETE CURB AND GUTTER
- PROPOSED STORM DRAIN PIPE
- CONCRETE SIDEWALK & DRIVEWAY

CONSTRUCTION NOTES:

1. ALL MAILBOXES ARE TO BE RESET.
2. ALL REPLACED DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
3. ALL MEASUREMENTS TAKEN TO EDGE OF GUTTER UNLESS OTHERWISE NOTED.
4. CURB TRANSITIONS AT PROPOSED INLETS ARE TO BE CONSTRUCTED PER HOWARD CO. STANDARD R-3.06.

"AS-BUILT" 7/23/03

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signatures]
DATE 1/15/02
DATE 1/15/02

Dewberry & Davis LLC
A Dewberry & Davis Company
3120 Timanus Lane, Suite #211
Baltimore, Maryland 21244
(410) 265-9500 FAX(410) 265-8875

Engineers
Planners
Surveyors
Landscape
Architects



| | |
|-----------|--|
| DES: | |
| DRN: | |
| CHK: | |
| DATE: | |
| BY: | |
| NO.: | |
| REVISION: | |
| DATE: | |

CAPITAL PROJECT NO.
J-4092

30' SCALE MAP NO.: _____ DATE: _____

ROADWAY PLAN
HARMEL DRIVE

SCALE:
1"=30'

SHEET
6 OF 14

MATCH LINE STA. 210+75 - SEE SHEET 7 OF 14

| HANDICAP SIDEWALK RAMP TYPE C STD. NO. R-4.03 | | | |
|---|--------------|-------|--|
| STA. 218+53.26, 15.41' LT. | HARMEL DRIVE | I EA. | |
| STA. 218+78.34, 18.80' RT. | HARMEL DRIVE | I EA. | |

| STANDARD COMBINATION CURB AND GUTTER STD. NO. R-3.01 | | | |
|--|---------|--|--|
| STA. 218+43.01, 10.10' RT. TO STA. 218+83.85, 36.64' RT. | 54 L.F. | | |
| STA. 218+42.61, 12.10' LT. TO STA. 218+71.61, 47.57' LT. | 52 L.F. | | |

| MODIFIED COMBINATION CURB AND GUTTER STD. NO. R-3.01 | | | |
|---|---------|--|--|
| STA. 210+75.00, 11' RT. TO STA. 218+25.77, 11.00' RT. | 75 L.F. | | |
| STA. 210+75.00, 13' LT. TO STA. 218+25.62, 13.00' LT. | 75 L.F. | | |

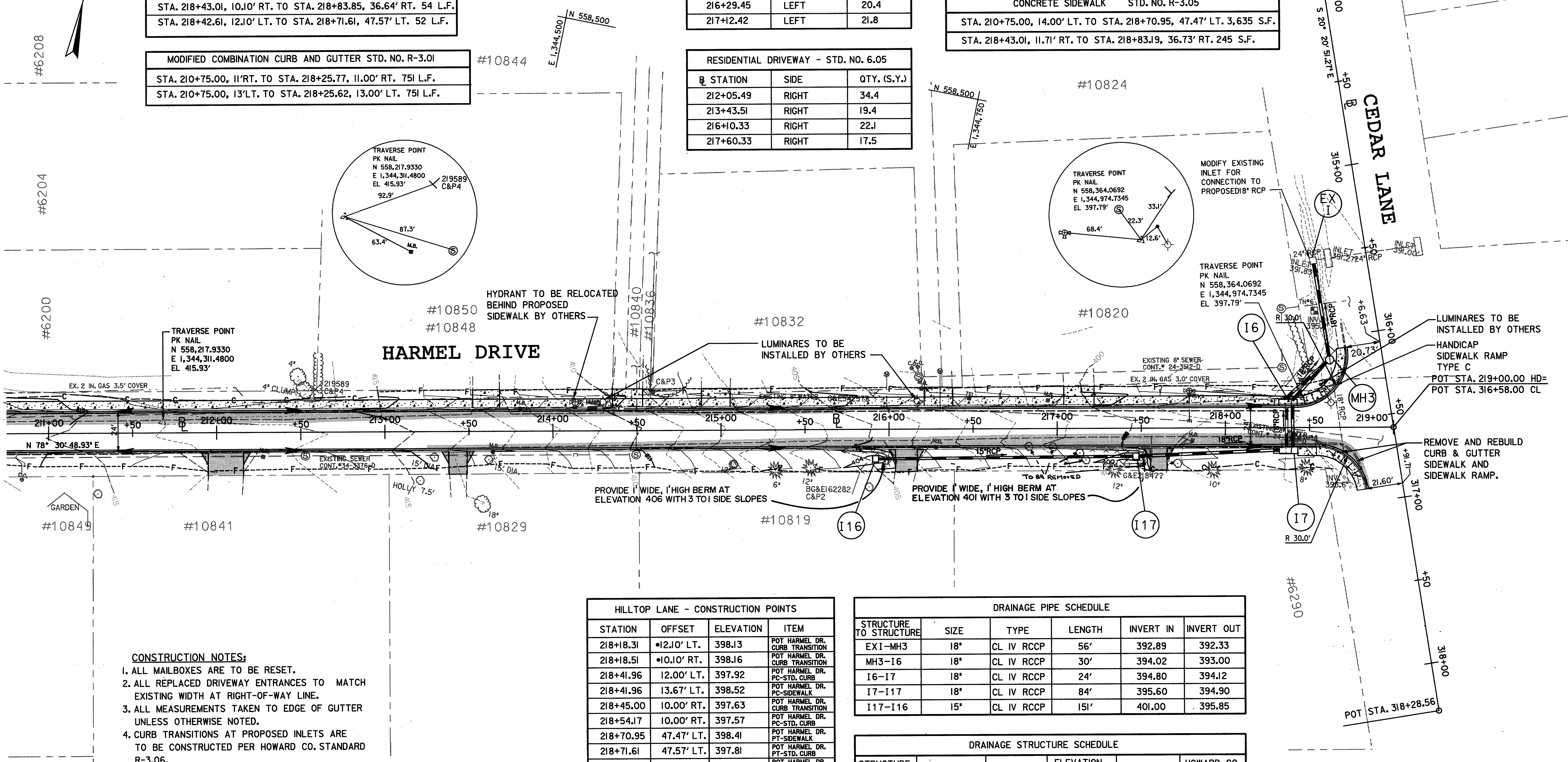
| RESIDENTIAL DRIVEWAY - STD. NO. 6.02 | | | |
|--------------------------------------|------|-------------|--|
| STATION | SIDE | QTY. (S.Y.) | |
| 213+60.28 | LEFT | 18.8 | |
| 214+44.28 | LEFT | 21.4 | |
| 214+97.08 | LEFT | 20.2 | |
| 216+29.45 | LEFT | 20.4 | |
| 217+12.42 | LEFT | 21.8 | |

| RESIDENTIAL DRIVEWAY - STD. NO. 6.05 | | | |
|--------------------------------------|-------|-------------|--|
| STATION | SIDE | QTY. (S.Y.) | |
| 212+05.49 | RIGHT | 34.4 | |
| 213+43.51 | RIGHT | 19.4 | |
| 216+10.33 | RIGHT | 22.1 | |
| 217+60.33 | RIGHT | 17.5 | |

| ALIGNMENT POINTS | | | |
|------------------|-----------|------------|--------------|
| POINT | STATION | NORTH | EAST |
| POT HARMEL DR. | 219+00.00 | 558,357.36 | 1,345,030.29 |
| POT CEDAR LA. | 318+28.56 | 558,197.44 | 1,345,089.60 |

| CONCRETE SIDEWALK STD. NO. R-3.05 | | | |
|--|------------|--|--|
| STA. 210+75.00, 14.00' LT. TO STA. 218+70.95, 47.47' LT. | 3,635 S.F. | | |
| STA. 218+43.01, 11.71' RT. TO STA. 218+83.19, 36.73' RT. | 245 S.F. | | |

MATCH LINE STA. 210+75 - SEE SHEET 6 OF 14



- CONSTRUCTION NOTES:**
- ALL MAILBOXES ARE TO BE RESET.
 - ALL REPLACED DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
 - ALL MEASUREMENTS TAKEN TO EDGE OF GUTTER UNLESS OTHERWISE NOTED.
 - CURB TRANSITIONS AT PROPOSED INLETS ARE TO BE CONSTRUCTED PER HOWARD CO. STANDARD R-3.06.

LEGEND

| | |
|--|-------------------------------|
| | -BITUMINOUS CONCRETE PAVEMENT |
| | -CONCRETE CURB AND GUTTER |
| | -PROPOSED STORM DRAIN PIPE |
| | -CONCRETE SIDEWALK & DRIVEWAY |

| HILLTOP LANE - CONSTRUCTION POINTS | | | | | |
|------------------------------------|------------|-----------|--------------------------------|--|--|
| STATION | OFFSET | ELEVATION | ITEM | | |
| 218+18.31 | 12.10' LT. | 398.13 | POT HARMEL DR. CURB TRANSITION | | |
| 218+18.51 | 10.10' RT. | 398.16 | POT HARMEL DR. CURB TRANSITION | | |
| 218+41.96 | 12.00' LT. | 397.92 | POT HARMEL DR. PC-STD. CURB | | |
| 218+41.96 | 13.67' LT. | 398.52 | POT HARMEL DR. PC-SIDEWALK | | |
| 218+45.00 | 10.00' RT. | 397.63 | POT HARMEL DR. CURB TRANSITION | | |
| 218+54.17 | 10.00' RT. | 397.57 | POT HARMEL DR. PC-STD. CURB | | |
| 218+70.95 | 47.47' LT. | 398.41 | POT HARMEL DR. PT-SIDEWALK | | |
| 218+71.61 | 47.57' RT. | 397.81 | POT HARMEL DR. PT-STD. CURB | | |
| 218+83.85 | 36.64' RT. | 396.99 | POT HARMEL DR. PT-STD. CURB | | |

*OFFSET MEASURED TO FACE OF CURB

| DRAINAGE PIPE SCHEDULE | | | | | | |
|------------------------|------|------------|--------|-----------|------------|--|
| STRUCTURE TO STRUCTURE | SIZE | TYPE | LENGTH | INVERT IN | INVERT OUT | |
| EXI-MH3 | 18" | CL IV RCCP | 56' | 392.89 | 392.33 | |
| MH3-I6 | 18" | CL IV RCCP | 30' | 394.02 | 393.00 | |
| I6-I7 | 18" | CL IV RCCP | 24' | 394.80 | 394.12 | |
| I7-I17 | 18" | CL IV RCCP | 84' | 395.60 | 394.90 | |
| I17-I16 | 15" | CL IV RCCP | 151' | 401.00 | 395.85 | |

| DRAINAGE STRUCTURE SCHEDULE | | | | | | |
|-----------------------------|-----------|------------|-----------------------|------------|---------------------|--|
| STRUCTURE NUMBER | STATION | OFFSET | ELEVATION TOP OF STR. | STRUCTURE | HOWARD CO. STD. NO. | |
| I6 | 218+37.31 | 13.00' LT. | 398.00 | A-10 INLET | SD 4.02 | |
| I7 | 218+37.51 | 11.00' RT. | 398.10 | A-10 INLET | SD 4.02 | |
| I16 | 215+91.99 | 17.57' RT. | 405.00 | YARD INLET | SD 4.39 | |
| I17 | 217+46.66 | 16.48' RT. | 400.00 | YARD INLET | SD 4.39 | |
| MH3 | 218+62.11 | 40.21' LT. | 398.20 | STD MH | G 5.01 | |

••OFFSET DISTANCES ARE MEASURED TO THE FACE OF THE STRUCTURE UNLESS OTHERWISE NOTED
 ••OFFSET DISTANCES ARE MEASURED TO THE CENTER OF THE STRUCTURE

"AS-BUILT" 7/23/03

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James P. ... 1/15/02
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

... 1/15/02
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis LLC Engineers
 A Dewberry & Davis Company
 3120 Timanus Lane, Suite #211
 Baltimore, Maryland 21244
 (410) 265-9500 FAX (410) 265-8875

Planners
 Surveyors
 Landscape Architects

STATE OF MARYLAND
 PROFESSIONAL ENGINEER

| | | | | | |
|-------|----|-----|----------|------|--|
| DES: | | | | | |
| DRN: | | | | | |
| CHK: | | | | | |
| DATE: | BY | NO. | REVISION | DATE | |

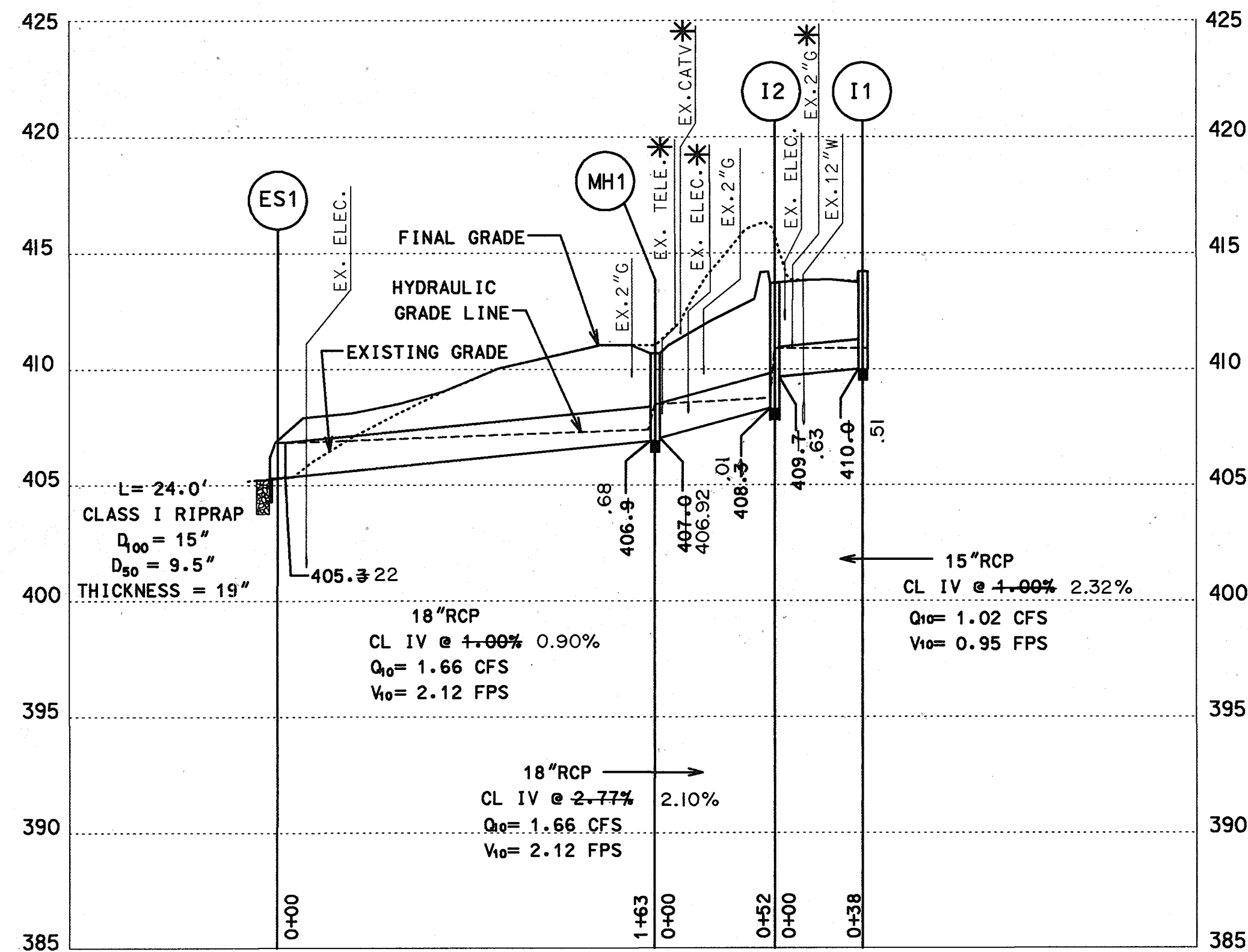
| | |
|---------------------|-------|
| CAPITAL PROJECT NO. | |
| J-4092 | |
| 30' SCALE MAP NO.: | DATE: |

ROADWAY PLAN
HARMEL DRIVE

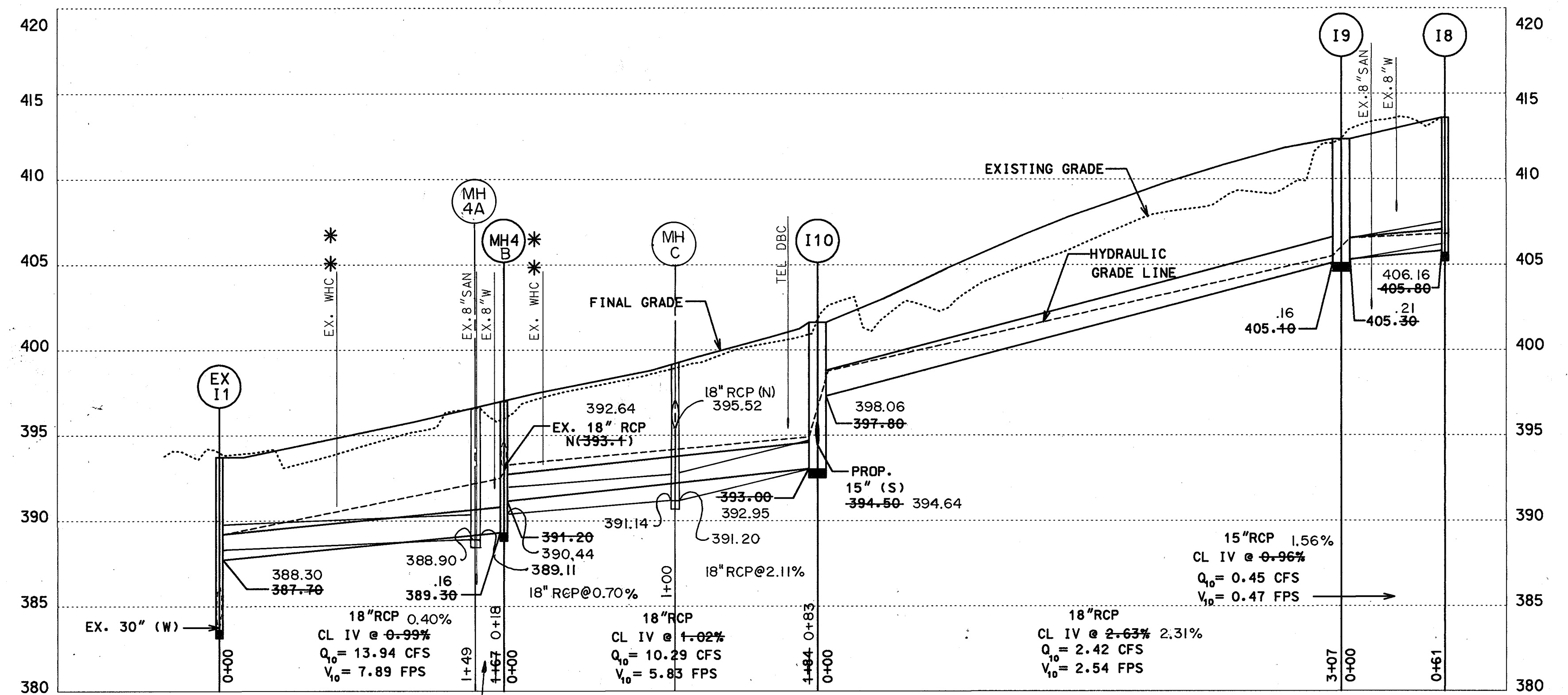
SCALE: 1"=30'
 SHEET 7 OF 14

ps04hill.dgn

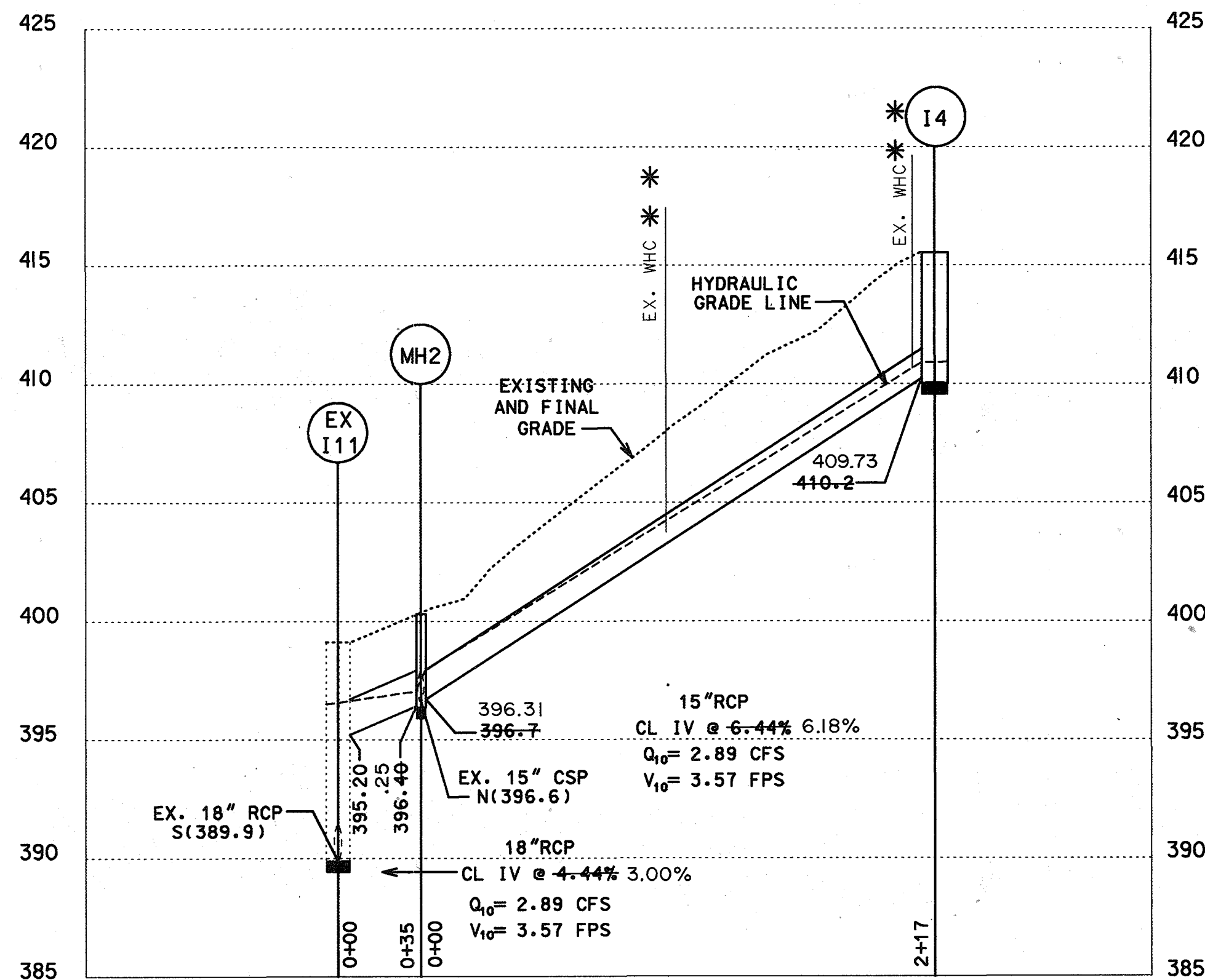
V:\card\user\jpn\040411.dgn 11/02/2001 04:48:02 PM



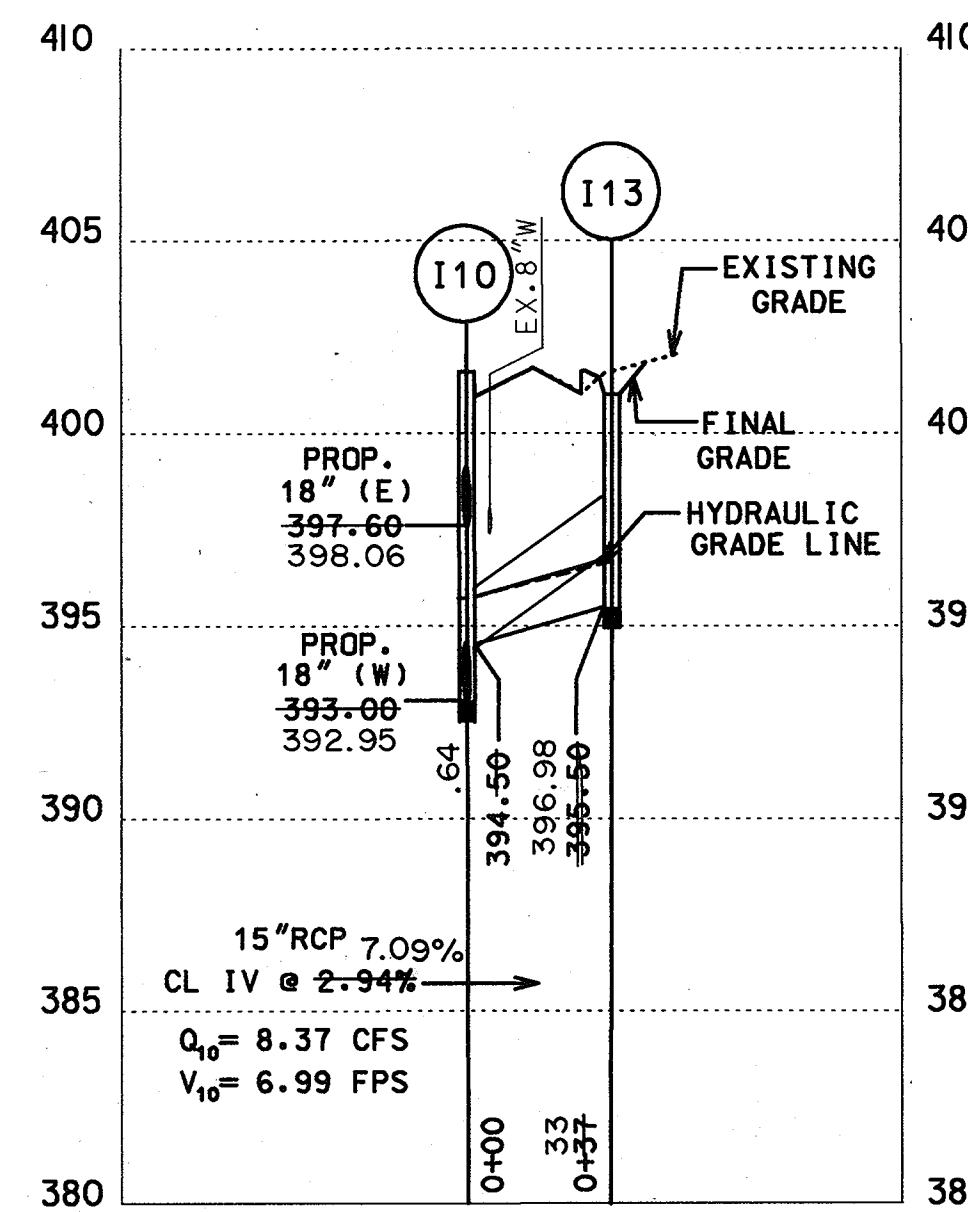
I-1 TO ES-1
HILLTOP LANE



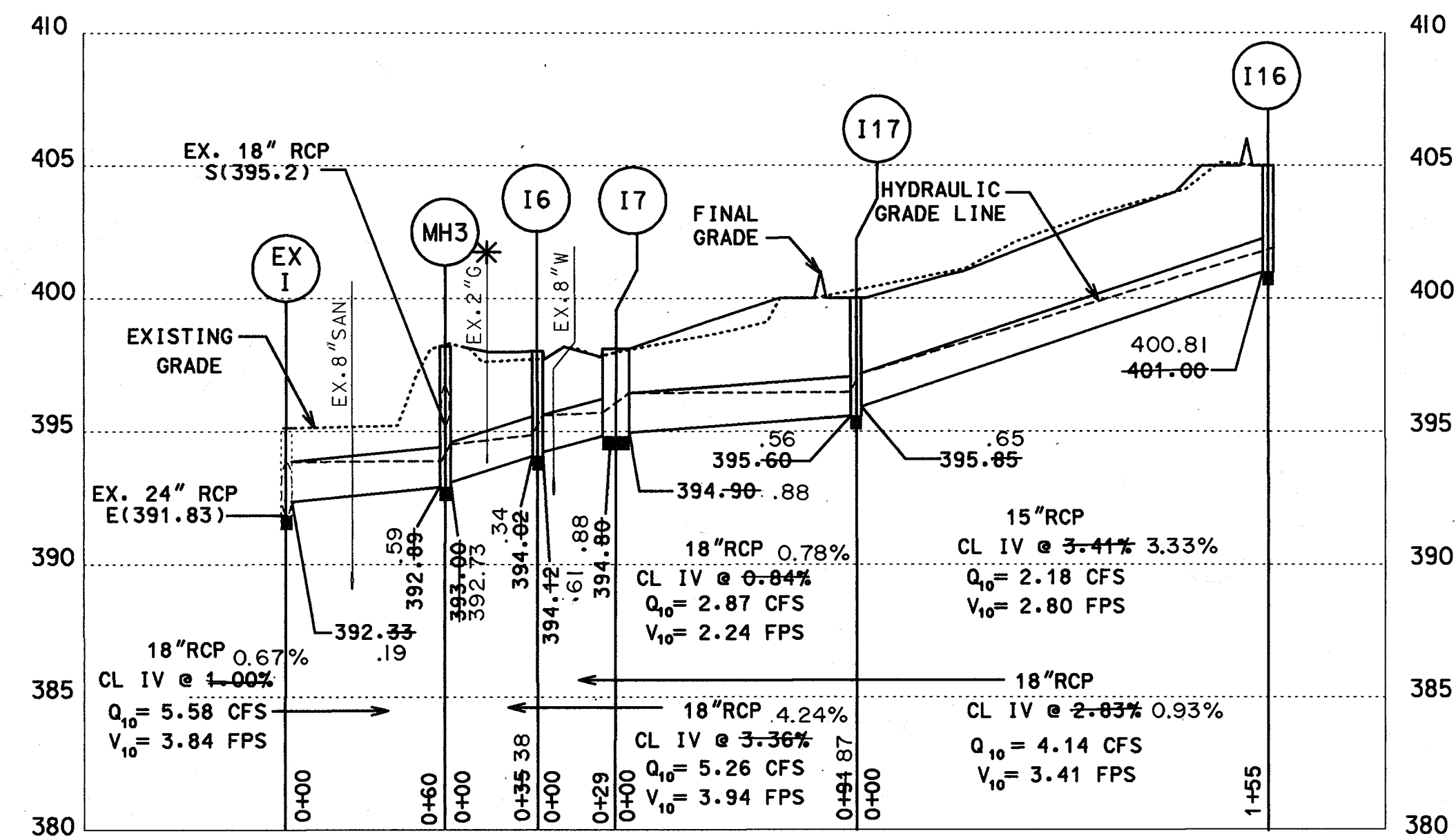
I-8 TO EX I-1
HARMEI DRIVE



I-4 TO EX I-11
HILLTOP LANE



I-13 TO I-10
HARMEI DRIVE



I-16 TO EX I
HARMEI DRIVE

* NOTE: UTILITIES TO BE RELOCATED BY OTHERS
 ** NOTE: WATER HOUSE CONNECTIONS TO BE RELOCATED BY CONTRACTOR WHERE NECESSARY

"AS-BUILT" 7/23/03

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE 1/15/02
 DATE 1-15-02

Dewberry & Davis LLC
 Engineers Planners Surveyors Landscape Architects
 3120 Timanus Lane, Suite #211
 Baltimore, Maryland 21244
 (410) 265-9500 FAX (410) 265-8876



| | |
|----------|-----|
| DES: | |
| DRN: | |
| CHK: | |
| DATE: | |
| BY | NO. |
| REVISION | |
| DATE | |

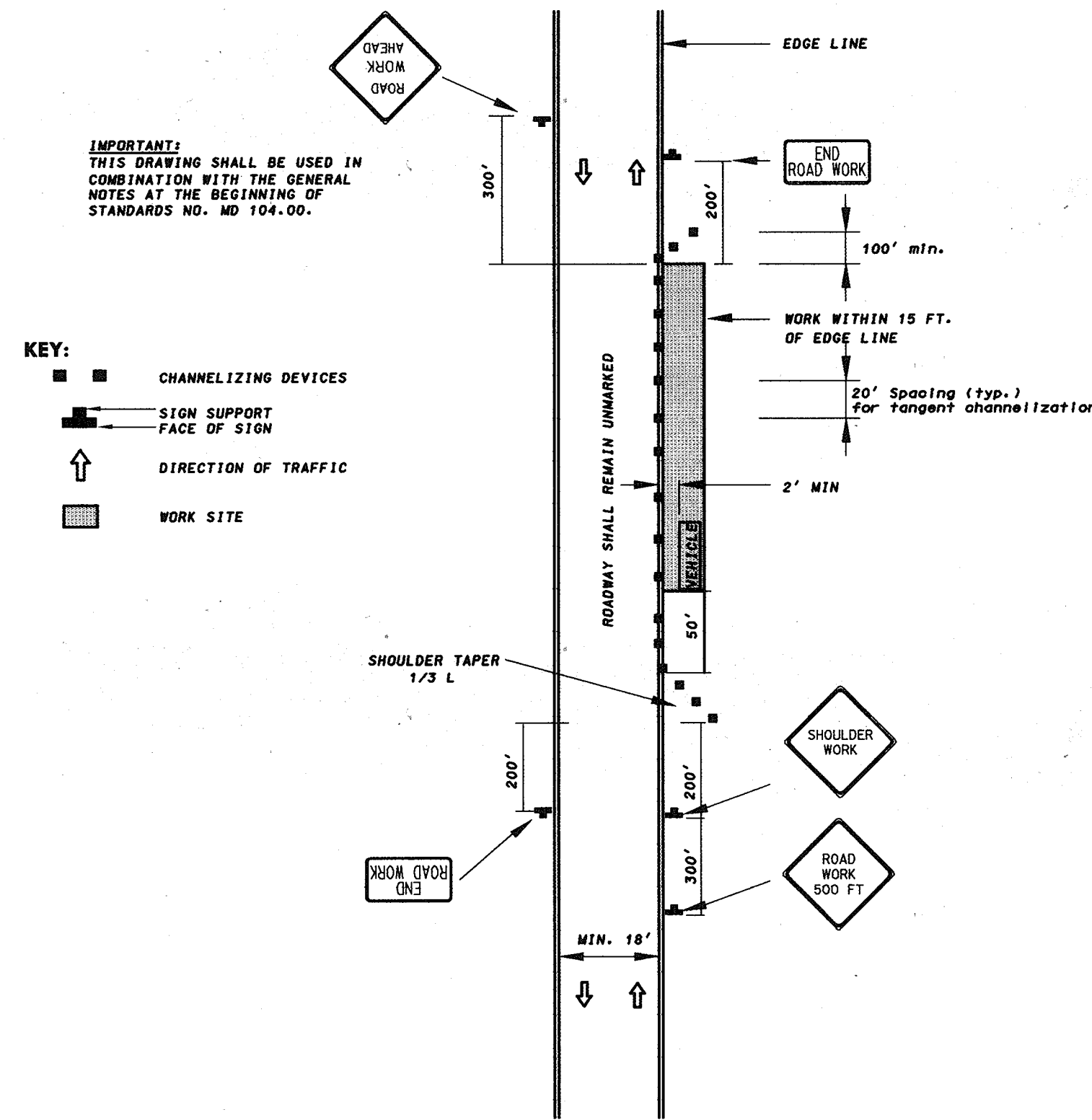
CAPITAL PROJECT NO.
 J-4092
 30' SCALE MAP NO.: _____ DATE: _____

STORM DRAIN PROFILES
 SHEET 8 OF 14

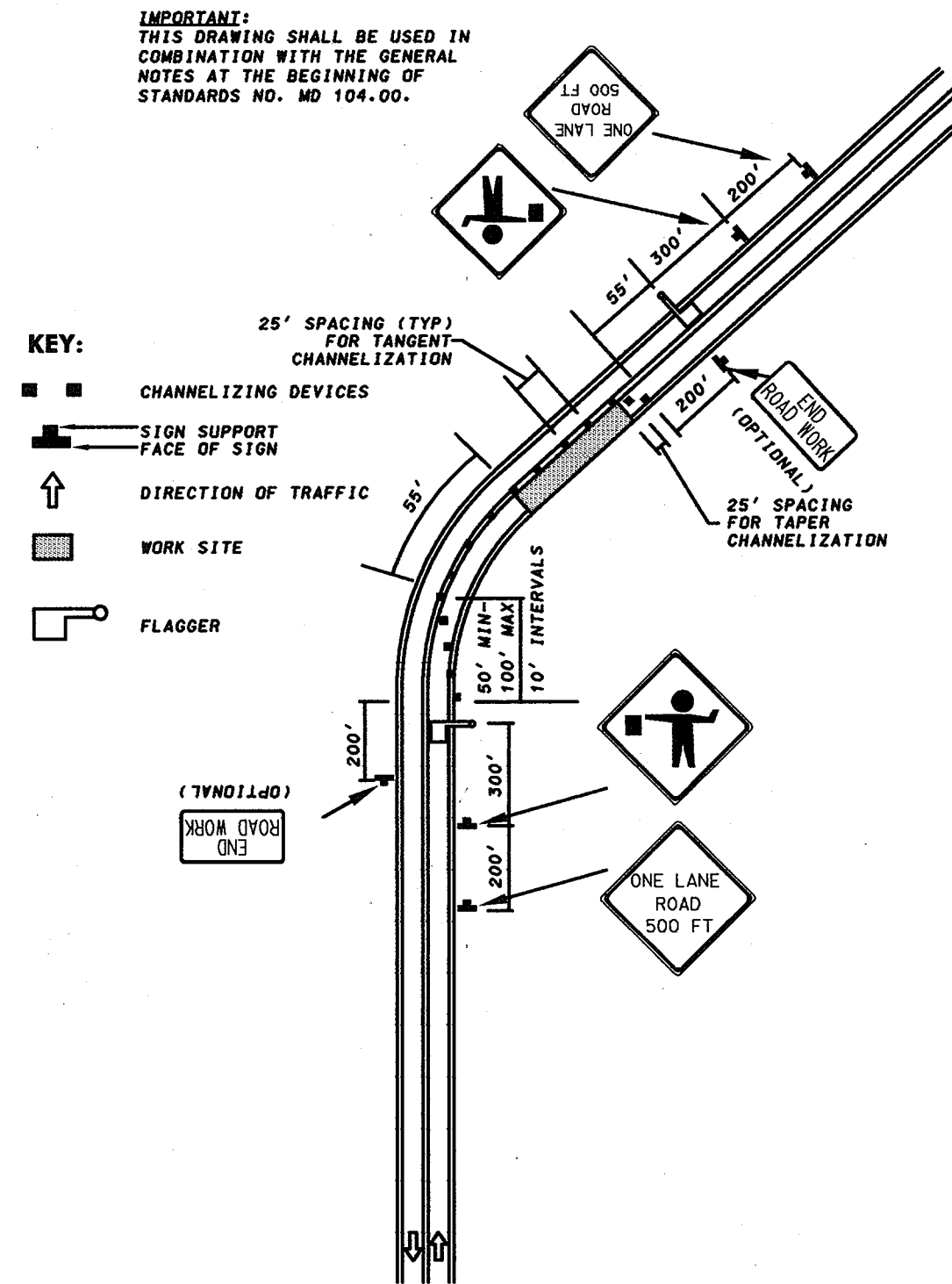
SCALE
 H: 1"=50'
 V: 1"=5'

... 180004\cad\dwg\proj\030111.dwg 09/26/2001 03:25:56 PM

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION FOR SHOULDER WORK



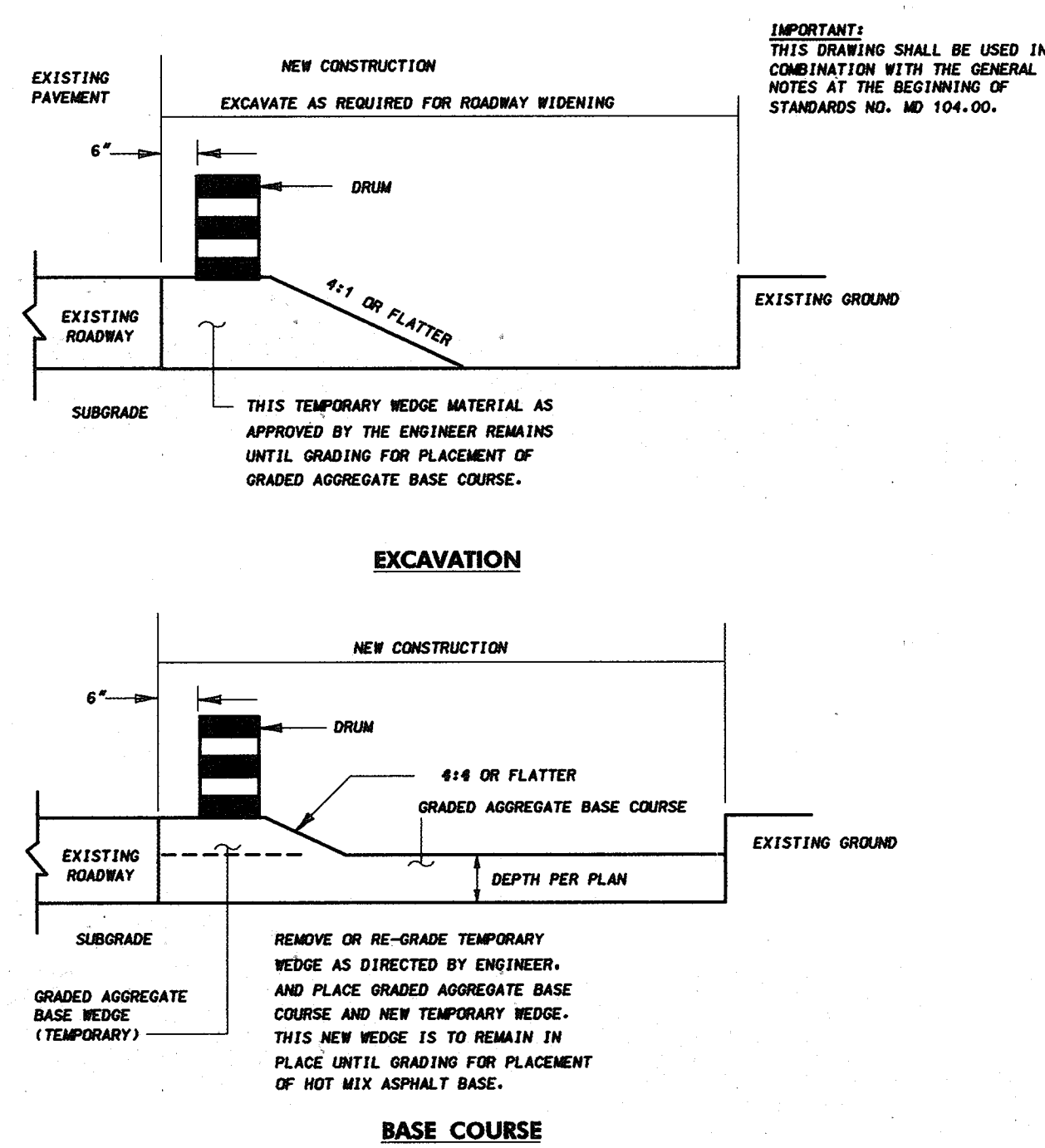
TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION FLAGGING OPERATION/2-LANE, 2-WAY, DAYTIME ONLY



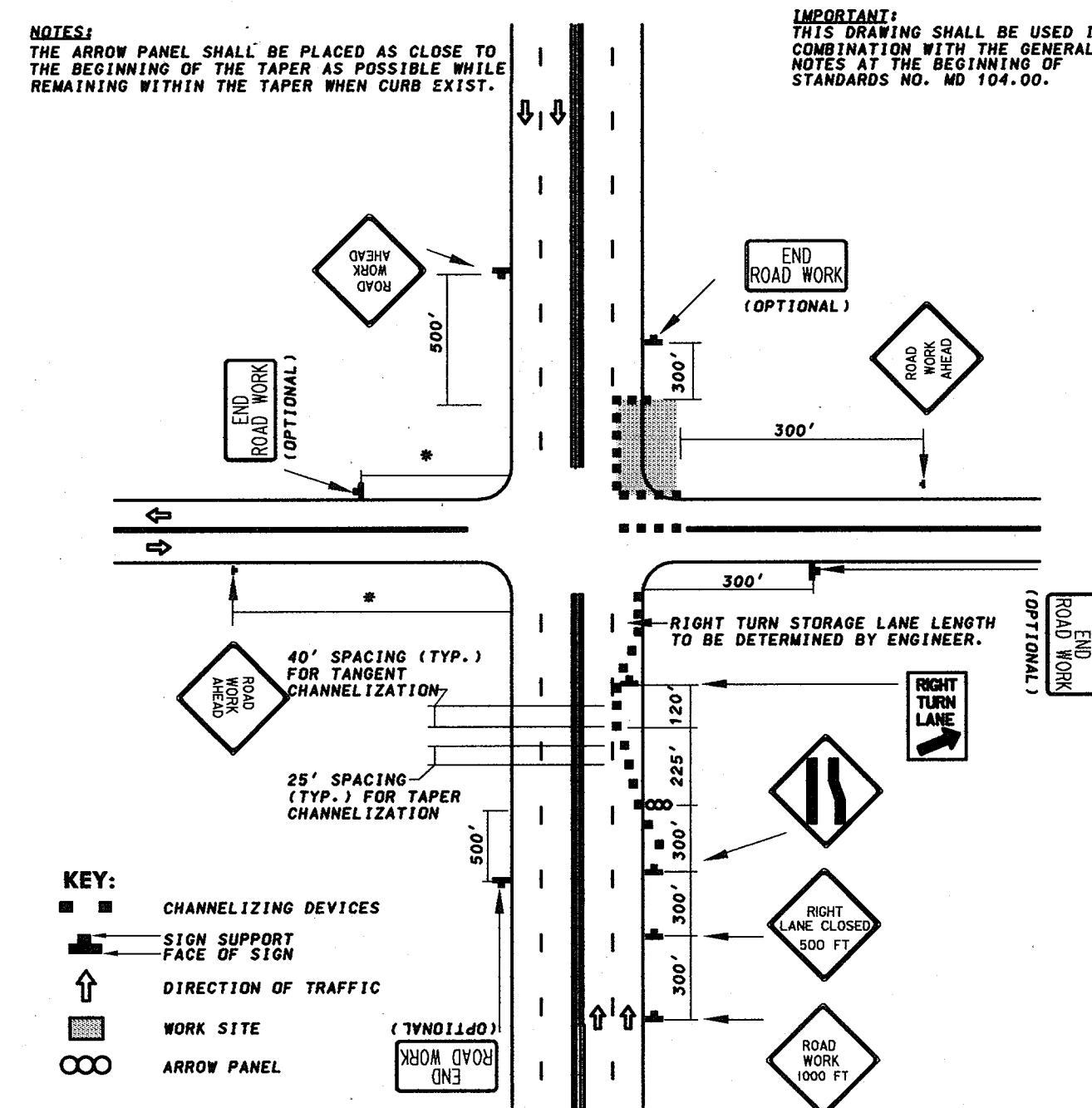
TRAFFIC CONTROL GENERAL NOTES

- All regulatory and warning signs shall be in place prior to construction, and shall be maintained throughout the duration of project.
- Arrow panel(s) shall be used as directed by the Engineer, and as shown on these plans.
- Refer to the contract special provisions for lane closure restrictions and times. Lane closures are not allowed between the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM.
- All existing signs in active construction areas shall be removed and / or relocated by the Contractor as directed by the Engineer.
- Contractor shall ensure that all traffic channelizing devices, as well as regulatory, warning and construction signs are installed and maintained in accordance with the Federal Highway Administrations "Manual on Uniform Traffic Control Devices", (MUTCD), and any addendums or supplements.
- Contractor shall measure and ensure at all times that appropriate sight distances are maintained for motorists and pedestrians, in accordance with the latest version of the American Association of State Highway and Transportation Officials, "A Policy on Geometric Design of Highways and Streets", and the Federal Highway Administrations, Manual on Uniform Traffic Control Devices, with all addendums or supplements. Under no circumstances shall any temporary signs and/or channelizing devices be placed in a way that may reduce the sight distance of motorists and pedestrians on Cedar Lane and all side roads and driveways.
- The Contractor shall use temporary flagging operations for short term construction.
- Contractor shall stage the construction at all intersecting streets and roads, such that a minimum of one 9' lane in each direction is maintained at all times.
- Both Harmel and Hilltop lane must have ADA crossings at Cedar Lane.
- Crosswalk or center lane markings should not be installed on this project.

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION FOR STAGED CONSTRUCTION AND PAVEMENT DROP-OFF



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION INTERSECTION RIGHT LANE CLOSURE (CEDAR LANE) DAYTIME ONLY

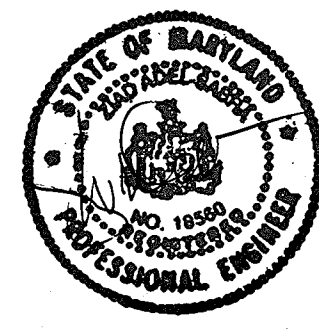


DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. ...
DEPARTMENT OF PUBLIC WORKS
DATE: 11/5/02
CHIEF, BUREAU OF ENGINEERING

Richard ...
DATE: 11/17/02
CHIEF, BUREAU OF HIGHWAYS

SABRA, WANG & ASSOCIATES, INC.
1506 JOH AVENUE
SUITE 180
BALTIMORE, MD 21227
WWW.SABRA-WANG.COM



| | | | |
|---------------|----|-----|----------|
| DES: KAR | | | |
| DRN: MER | | | |
| CHK: ZAS | | | |
| DATE: 5/18/01 | BY | NO. | REVISION |
| | | | |
| | | | |
| | | | |

CAPITAL PROJECT NO.

J-4092

NO.: _____ DATE: 5/18/01

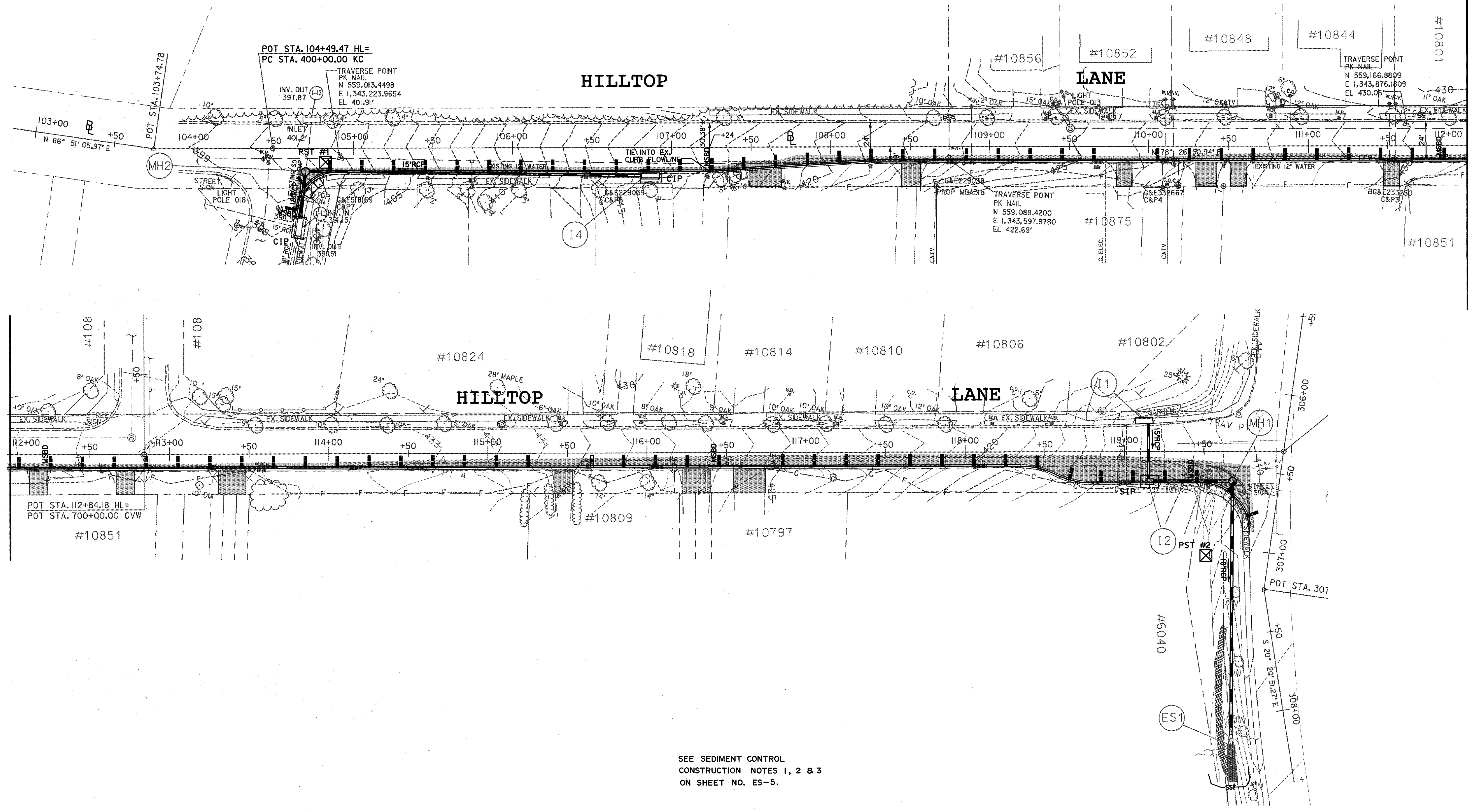
MAINTENANCE OF TRAFFIC PLAN

SCALE AS SHOWN

SHEET 9 OF 14

MATCH LINE STA. 112+00 - THIS SHEET

MATCH LINE STA. 112+00 - THIS SHEET

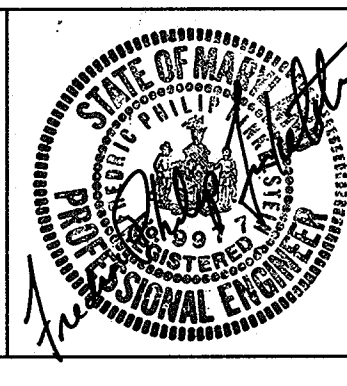


SEE SEDIMENT CONTROL
CONSTRUCTION NOTES 1, 2 & 3
ON SHEET NO. ES-5.

EROSION & SEDIMENT CONTROL SHEET ES-1 OF ES-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 11/5/02
DATE: 4/15/03

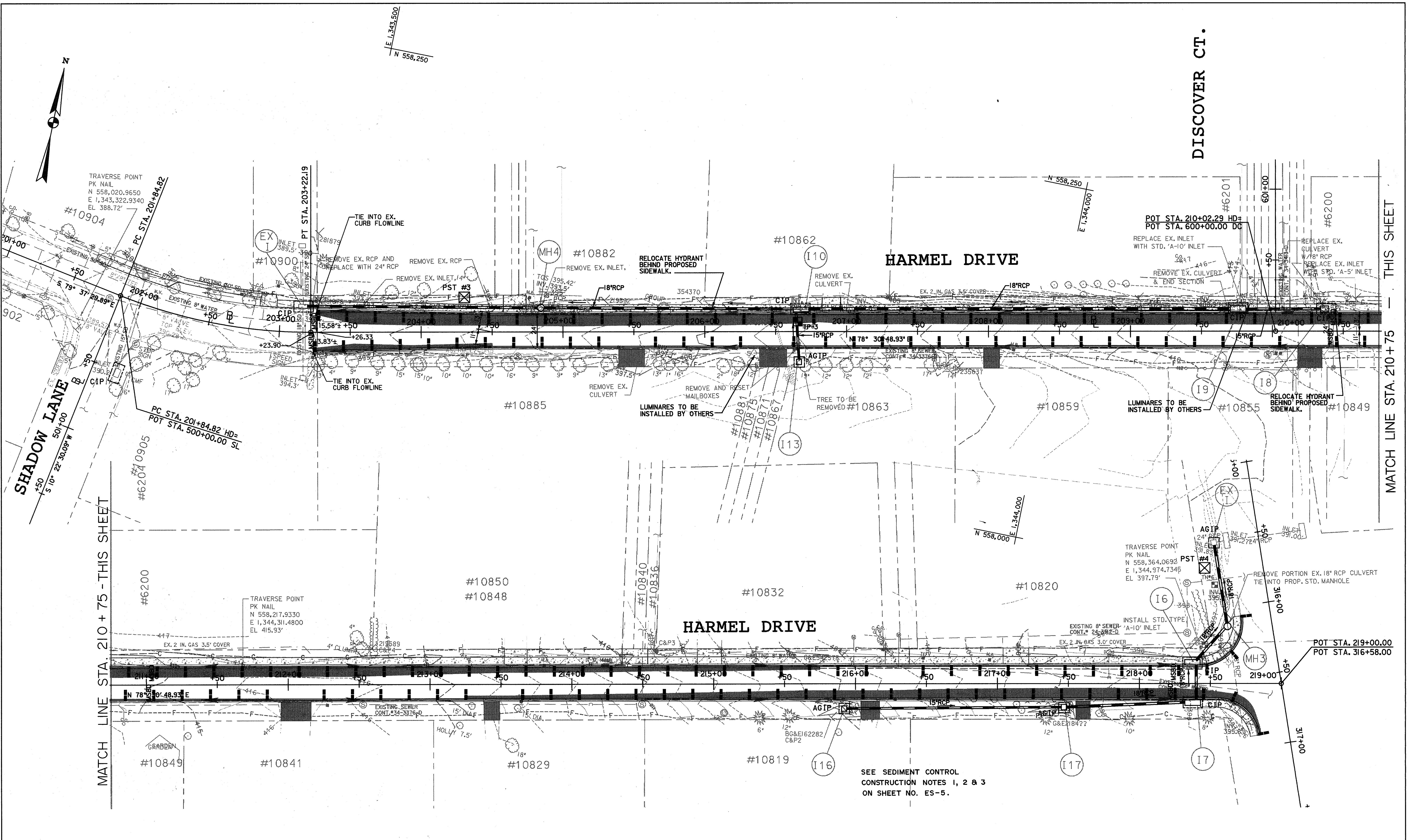
Dewberry & Davis LLC
A Dewberry & Davis Company
3120 Timanus Lane, Suite #211
Baltimore, Maryland 21244
(410) 265-9500 FAX(410) 265-8875
Engineers Planners Surveyors Landscape Architects



| | | | | |
|-------|----|-----|----------|------|
| DES: | | | | |
| DRN: | | | | |
| CHK: | | | | |
| DATE: | BY | NO. | REVISION | DATE |

CAPITAL PROJECT NO.
J-4092
30' SCALE MAP NO.: _____ DATE: _____

**LAYOUT PLAN
HILLTOP LANE**
SCALE: 1"=30'
SHEET 10 OF 14



DISCOVER CT.

MATCH LINE STA. 210+75 - THIS SHEET

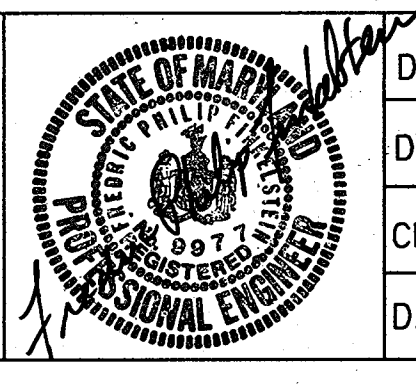
MATCH LINE STA. 210+75 - THIS SHEET

SEE SEDIMENT CONTROL CONSTRUCTION NOTES 1, 2 & 3 ON SHEET NO. ES-5.

EROSION & SEDIMENT CONTROL SHEET ES-2 OF ES-5

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE 1/15/02
 DATE 4/16/02

Dewberry & Davis LLC
 A Dewberry & Davis Company
 3120 Timanus Lane, Suite #211
 Baltimore, Maryland 21244
 (410) 265-9500 FAX (410) 265-8876
 Engineers Planners Surveyors Landscape Architects



| | |
|----------|------|
| DES: | |
| DRN: | |
| CHK: | |
| DATE: | |
| BY | NO. |
| REVISION | DATE |

CAPITAL PROJECT NO.
 J-4092
 30' SCALE MAP NO.: DATE:

LAYOUT PLAN
HARMEL DRIVE
 SCALE: 1"=30'
 SHEET 11 OF 14

STANDARD AND SPECIFICATIONS

FOR
TOPSOIL

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- I. This practice is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
- II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

- II. Topsoil Specifications - Soil to be used as topsoil must meet the following:
 1. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1/2" in diameter.
 11. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 111. Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres:

1. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acres:

1. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - b. Organic content of topsoil shall be not less than 1.5 percent by weight.
 - c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Notes: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

11. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

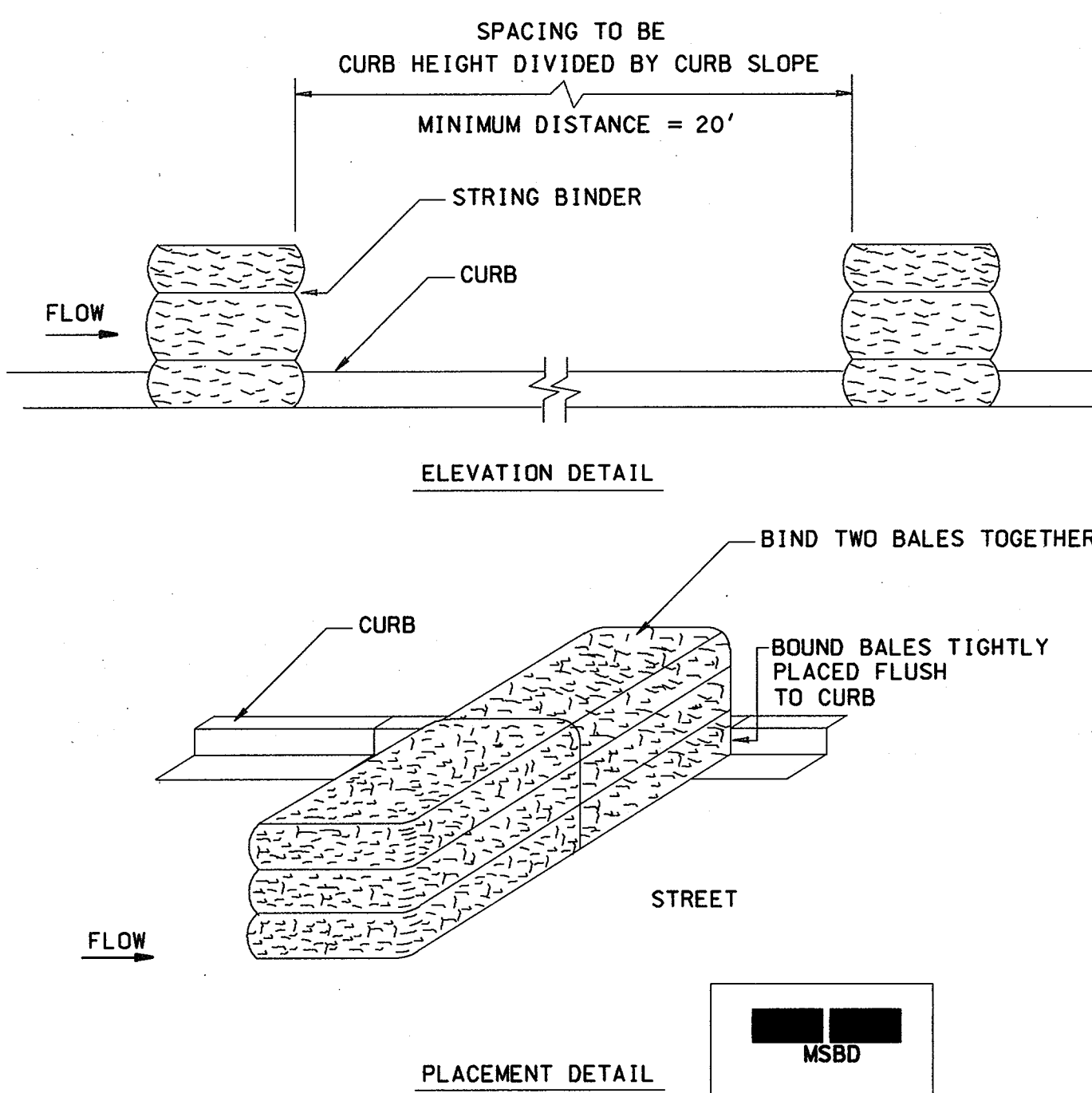
V. Topsoil Application

1. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
11. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
111. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- 1v. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

1. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - a. Composted sludge shall be supplied by, originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
- 1v. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specification, Soil Preparation and Sodding, MD-VA Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.



CONSTRUCTION SPECIFICATIONS

1. Bales shall be placed at the face of curb and placed end to end in a row with the ends of each of two bales tightly abutting the adjacent bale and extending out to the centerline.
2. Each two-bale dike shall be placed tightly against the curb and bound to each other.
3. Bales shall be placed at a distance equal to the curb height divided by the longitudinal slope of the curb or a minimum of 20' whichever is greater.
4. Straw bale dikes shall be inspected frequently and after each rain event and maintenance performed as necessary.
5. All bales shall be removed when the site has been stabilized.

MODIFIED STRAW BALE DIKE

SEQUENCE OF CONSTRUCTION:

1. THE CONTRACTOR IS TO OBTAIN A GRADING PERMIT FROM HOWARD COUNTY. (2 Weeks)
2. THE CONTRACTOR IS TO NOTIFY HOWARD SOIL CONSERVATION DISTRICT AND HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS, SEDIMENT CONTROL DIVISION 48 HOURS BEFORE STARTING CONSTRUCTION. (3 Days)
3. THE CONTRACTOR SHALL ATTEND AN ON-SITE FIELD MEETING WITH SEDIMENT CONTROL INSPECTOR BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES. (1 Day)
4. FOR ALL AREAS, THE CONTRACTOR IS TO PROVIDE TEMPORARY SEDIMENT CONTROL MEASURES AND PERMANENT SEEDING & MATTING STABILIZATION TO EACH DISTURBED AREA BEFORE STOPPING WORK EACH DAY. NO AREA IS TO REMAIN UNSTABILIZED UNLESS THE CONTRACTOR IS ACTIVELY WORKING AT THAT LOCATION. (2 Months)
 - A. FOR UTILITY WORK, INCREMENT CONSTRUCTION FROM DOWNSTREAM TO UPSTREAM, AND HAVE A PORTABLE SEDIMENT TANK AVAILABLE.
 - B. NO TEMPORARY SEEDING IS ANTICIPATED TO BE DONE; CONTRACTOR TO USE BIODEGRADABLE MATTING WITH SEEDING. TO BE INSTALLED ONE TIME.
5. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ANY TEMPORARY SEDIMENT CONTROL MEASURES AND PERMANENTLY STABILIZE AREA. (1 Week)

LEGEND

- PST #x PORTABLE SEDIMENT TANK
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- AGIP AT GRADE INLET PROTECTION
- MSBD MODIFIED STRAW BALE DIKE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Ronald G. Lepson 1/15/02
Signature of Developer Date

Ronald G. Lepson
Print Name

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT

Fredric Philip Finkelstein 1/22/02
Signature of Engineer Date

Fredric Philip Finkelstein
Print Name

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Vin Ayres 1/22/02
USDA Natural Resources Conservation Service Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 1/22/02
Howard Soil Conservation District Date

SEDIMENT CONTROL NOTES AND DETAILS SHEET NO. ES-3 OF ES-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 1/15/02
DEPARTMENT OF PUBLIC WORKS DATE
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

[Signature] 1-17-02
CHIEF, BUREAU OF HIGHWAYS DATE

Dewberry & Davis LLC
A Dewberry & Davis Company
3120 Timanus Lane, Suite #211
Baltimore, Maryland 21244
(410) 265-9500 FAX (410) 265-8875

Engineers
Planners
Surveyors
Landscape Architects



| | | | | |
|-------|----|-----|----------|------|
| DES: | | | | |
| DRN: | | | | |
| CHK: | | | | |
| DATE: | BY | NO. | REVISION | DATE |

| | |
|---------------------|-------|
| CAPITAL PROJECT NO. | |
| J-4092 | |
| SCALE MAP NO.: | DATE: |

SEDIMENT CONTROL NOTES AND DETAILS

SCALE AS SHOWN

SHEET 12 OF 14

STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards and Specifications For Soil Erosion and Sediment Control and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, but 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. I, Chapter 12 of the Howard County Design Manual, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis

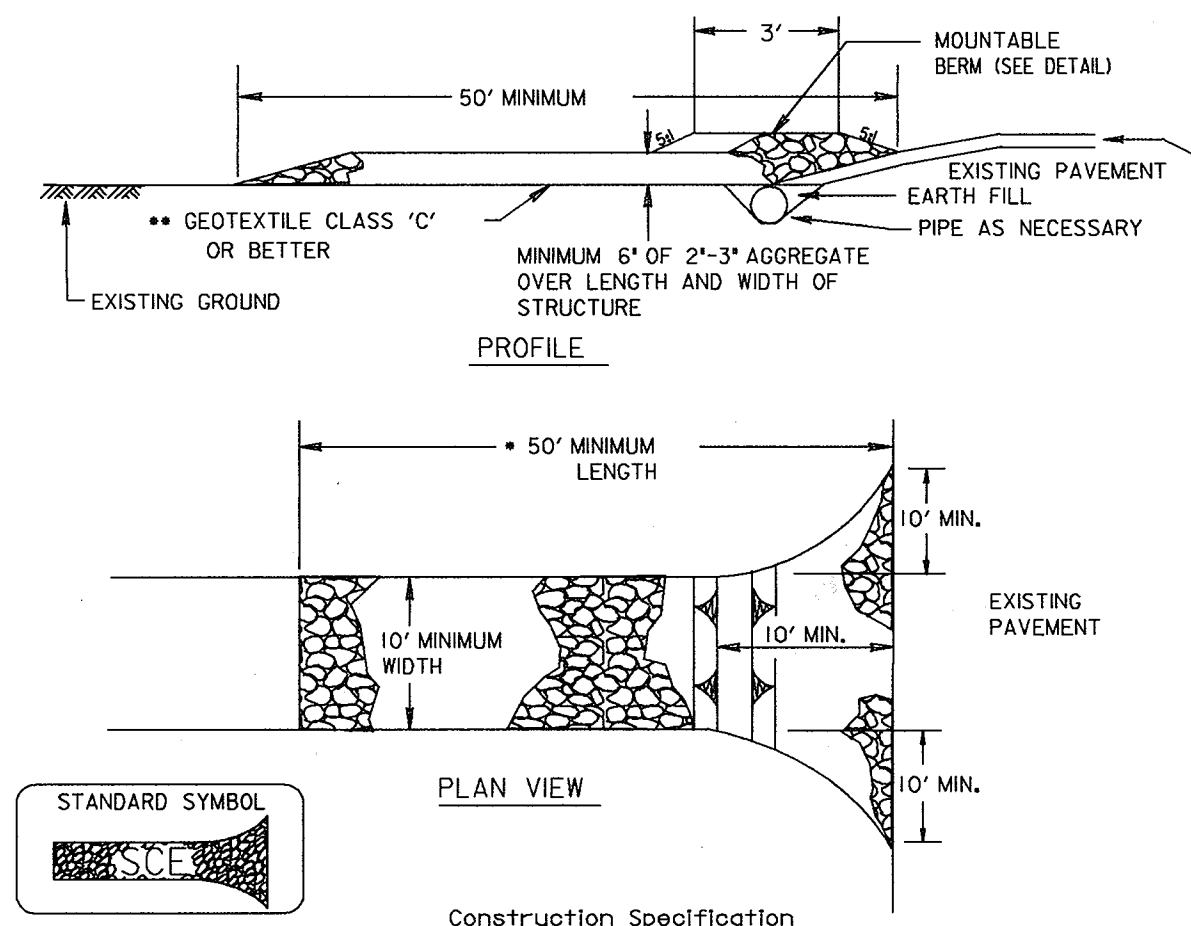
| | |
|--|--|
| Site is defined as areas involving any improvements. | 2.85 Acres |
| Total Area of Site | 1.89 Acres |
| Area Disturbed | 0.91 Acres (New Pavement 0.91 Acres) |
| Area to be roofed or paved | 0.99 Acres |
| Area to be vegetatively stabilized | 217 Cu. Yds. |
| Total Cut | 614 Cu. Yds. |
| Total Fill | To be determined by contractor and approved by the sediment control inspector. |
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

STABILIZED CONSTRUCTION ENTRANCE - MAINTENANCE

The entrance shall be maintained in a condition which will minimize tracking of sediment onto public rights-of-way. This may require adding stone or other repairs as conditions demand. All sediment spilled, dropped, or tracked onto public rights-of-way must be removed immediately by vacuum sweeping, scraping, or sweeping.

When necessary, wheels shall be cleaned or washed to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device. Daily inspection and maintenance is required.

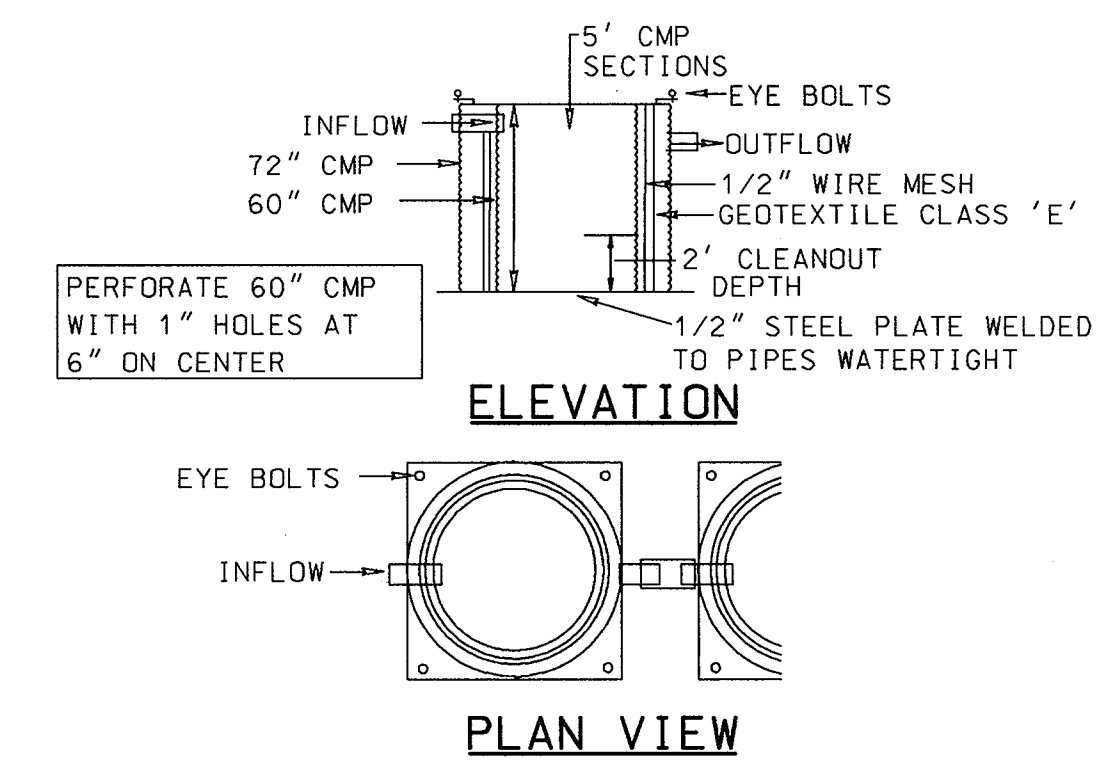
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- Length - minimum of 50' (+30' for single residence lots).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 21 - PORTABLE SEDIMENT TANK



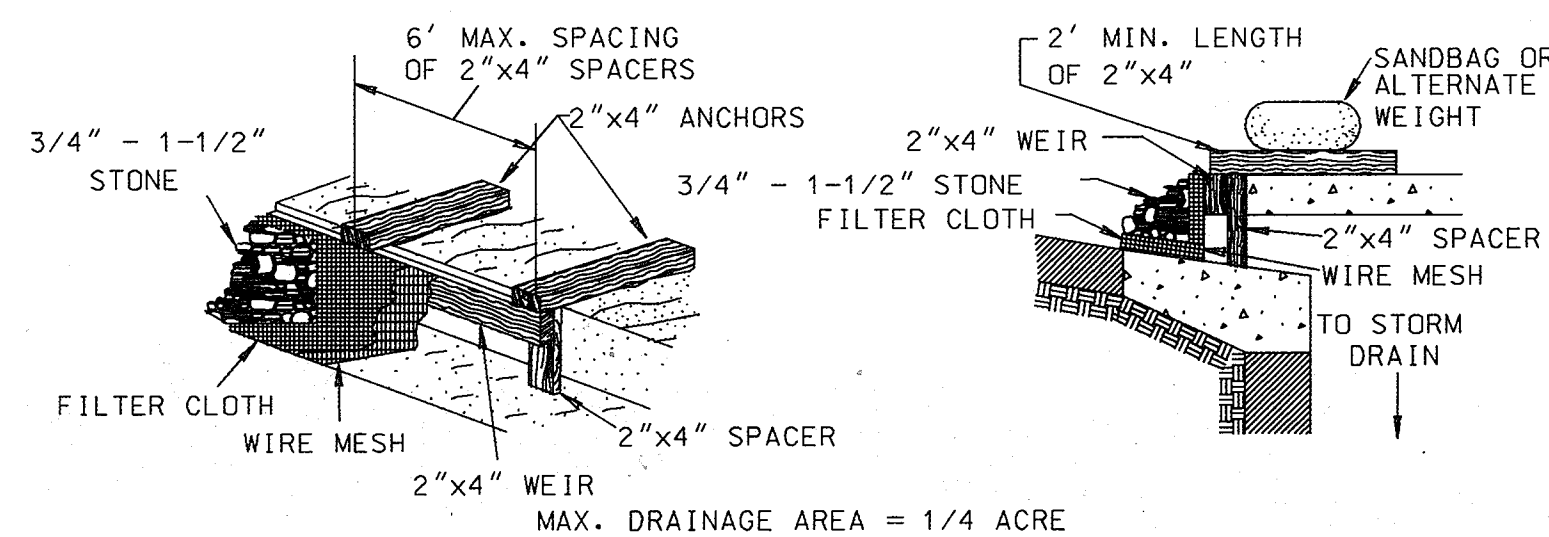
CONSTRUCTION SPECIFICATIONS

- THE FOLLOWING FORMULA SHALL BE USED IN DETERMINING THE STORAGE VOLUME OF THE SEDIMENT TANK: 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP DISCHARGE CAPACITY.
- AN EXAMPLE OF A TYPICAL SEDIMENT TANK IS SHOWN ABOVE. OTHER CONTAINER DESIGNS CAN BE USED IF THE STORAGE VOLUME IS ADEQUATE AND APPROVAL IS OBTAINED FROM THE LOCAL APPROVAL AGENCY.
- TANKS MAY BE CONNECTED IN SERIES.

PORTABLE SEDIMENT TANK

SCALE: NONE

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE D-14-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

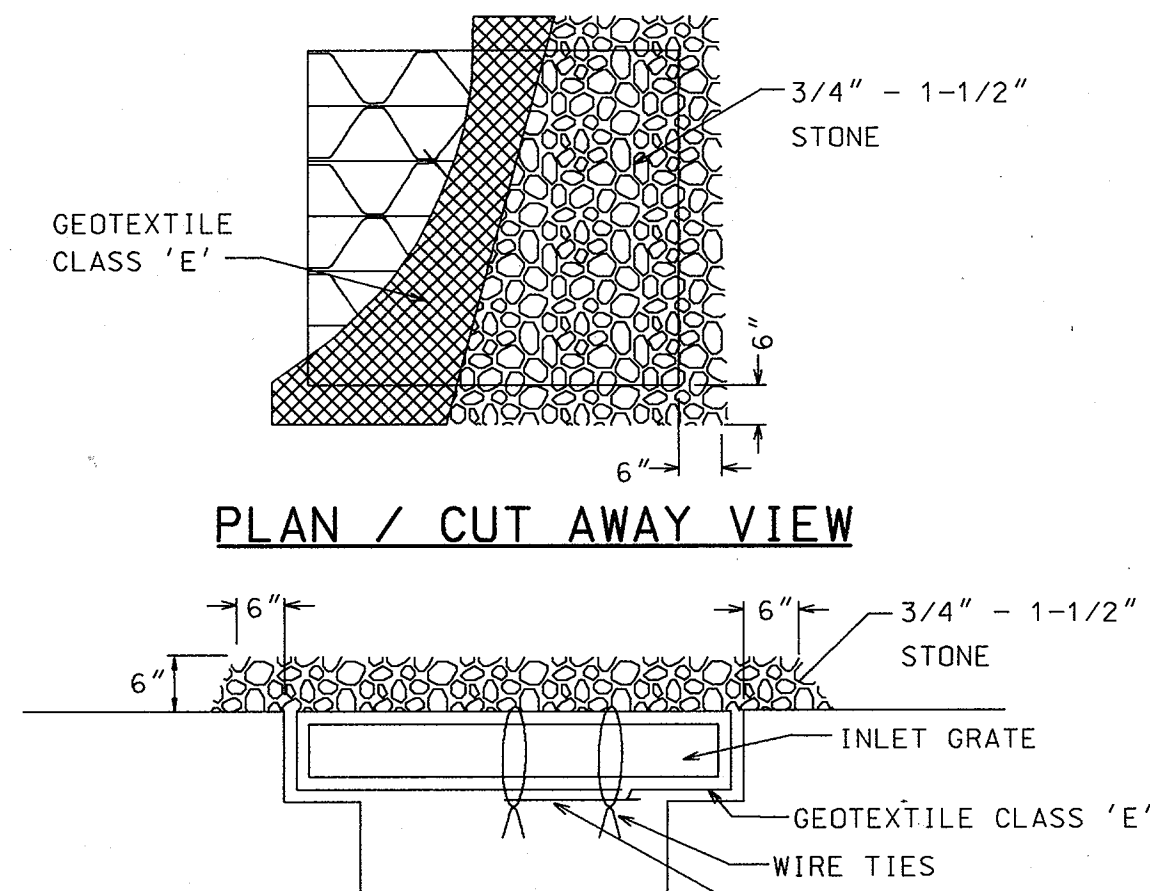


CONSTRUCTION SPECIFICATIONS

- ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4") TO THE 2"x4" WEIR (MEASURING THROAT LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
- PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS 'E' THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2"x4" WEIR.
- SECURELY NAIL THE 2"x4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MIN. 2' LENGTHS OF 2"x4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2"x4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
- THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MIN. 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
- FORM THE 1/2"x1/2" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4"x1-1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE FABRIC IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
- THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
- ASSURE THAT STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW TO THE INLET.

CURB INLET PROTECTION

SCALE: NONE



PLAN / CUT AWAY VIEW

CROSS SECTION

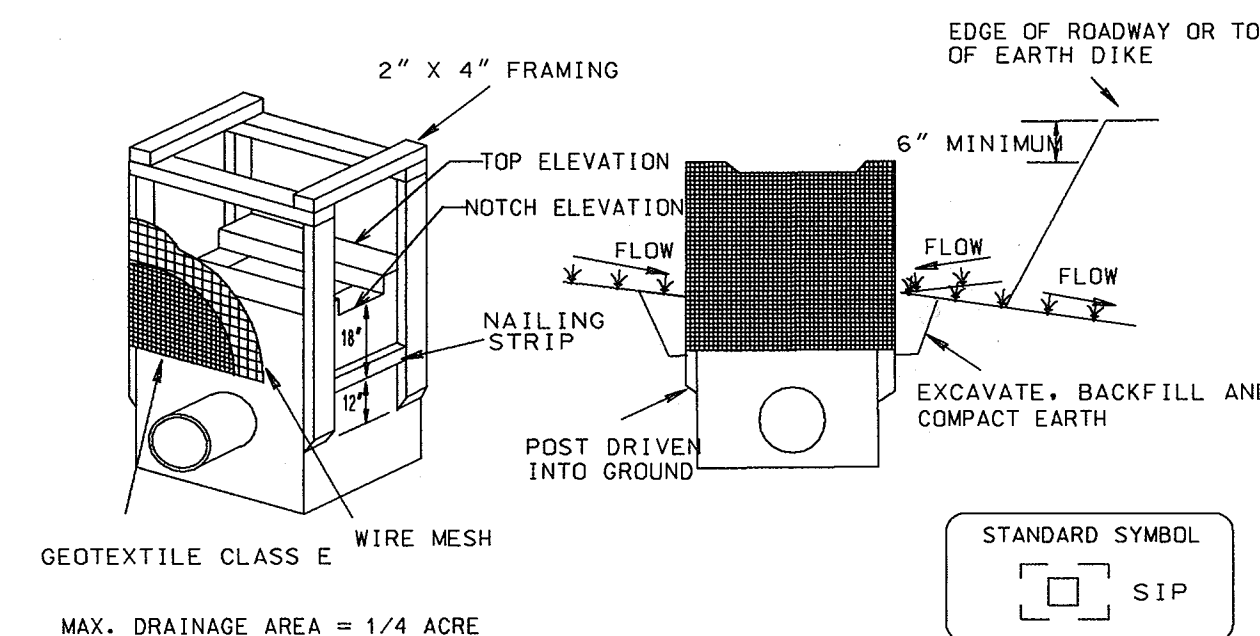
MAX. DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

- LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS 'E' TO COMPLETELY COVER ALL OPENINGS. THEN SET GRATE BACK IN PLACE.
- PLACE 3/4" TO 1-1/2" STONE, 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

AT GRADE INLET PROTECTION

SCALE: NONE



Construction Specifications

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

STANDARD INLET PROTECTION

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Ronald G. Leppin 1/15/02
Signature of Developer Date
Ronald G. Leppin
Print Name

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT

Frederic Philip Finkelstein 1/20/02
Signature of Engineer Date
Frederic Philip Finkelstein
Print Name

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jin Nguyen 1/22/02
USDA-Natural Resources Conservation Service Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 1/22/02
Howard Soil Conservation District Date

SEDIMENT CONTROL NOTES AND DETAILS SHEET NO. ES-4 OF ES-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 1/15/02
DEPARTMENT OF PUBLIC WORKS DATE
[Signature] 1/15/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION DATE

Dewberry & Davis LLC
A Dewberry & Davis Company
3120 Timanus Lane, Suite #211
Baltimore, Maryland 21244
(410) 265-9500 FAX(410) 265-8875

Engineers
Planners
Surveyors
Landscape
Architects



| | | | | | |
|-------|----|-----|----------|------|--|
| DES: | | | | | |
| DRN: | | | | | |
| CHK: | | | | | |
| DATE: | BY | NO. | REVISION | DATE | |

CAPITAL PROJECT NO.

J-4092

SCALE MAP NO.: DATE:

SEDIMENT CONTROL NOTES AND DETAILS

SCALE AS SHOWN
SHEET 13 OF 14

es02f11.dgn

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Section I - Vegetative Stabilization Methods and Materials

A. Site Preparation

- 1. Install erosion and sediment control structures...
2. Perform all grading operations at right angles to the slope...
3. Schedule required soil tests to determine soil amendment...
4. Soil Amendments (Fertilizer and Lime Specifications)

C. Seeded Protection

1. Temporary Seeding

- a. Seeded preparation shall consist of loosening soil...
b. Apply fertilizer and lime as prescribed on the plans...
c. Incorporate lime and fertilizer into the top 3-5" of soil...

II. Permanent Seeding

- a. Minimum soil conditions required for permanent vegetative establishment...
b. Areas previously graded in conjunction with the project...
c. Apply soil amendments as per soil tests...
d. Seed Specifications

Methods of Seeding

- 1. Hydroseeding: Apply seed uniformly with hydroseeder...
2. Straw Mulch: Straw shall consist of thoroughly threshed wheat...
3. Wood Cellulose Fiber Mulch: WCFM shall consist of specially prepared wood cellulose...

F. Mulch Specifications (in order of preference)

- 1. Straw: Straw shall consist of thoroughly threshed wheat...
2. Wood Cellulose Fiber: WCFM shall consist of specially prepared wood cellulose...
3. WCFM shall consist of specially prepared wood cellulose...

6. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

- 1. If grading is completed, the rate of the seeding, mulch alone shall be applied...
2. When straw mulch is used, it shall be applied over all seeded areas...
3. Wood cellulose fiber used as a mulch shall be applied at a net dry weight...
4. Seeding Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately...

Incremental Stabilization - Cut Slopes

- 1. All cut slopes shall be dressed, prepared, seeded and mulched...
2. Construction sequence (refer to Figure 4 below):
a. Excavate and stabilize all temporary erosion...
b. Perform phase 1 excavation, dress and stabilize...

Note: Once excavation has begun, the operation should be continuous from grubbing through completion of grading and placement of topsoil...

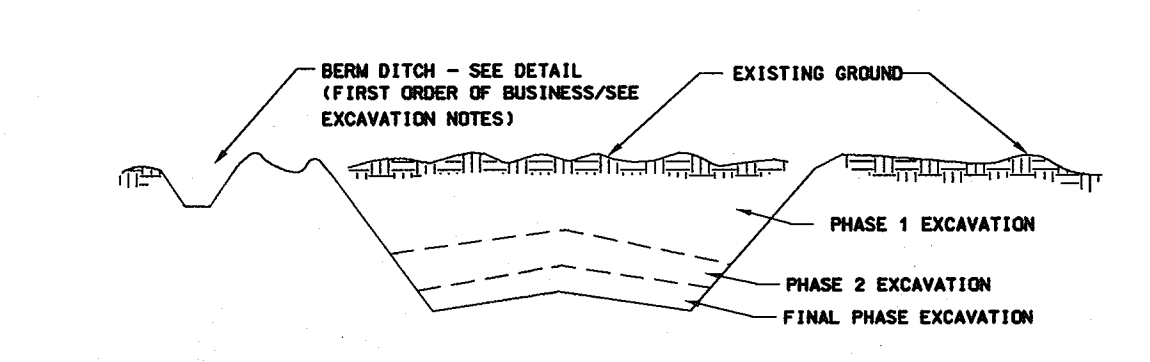


Figure 4 Incremental Stabilization - Cut

J. Incremental Stabilization of Embankments - Fill Slopes

- 1. Embankments shall be constructed in lifts as prescribed on the plans...
2. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches...
3. At the end of each day, temporary berms and pipe slope drains should be constructed...

- IV. Construction sequence (refer to Figure 5 below):
a. Excavate and stabilize all temporary erosion...
b. Place phase 1 embankment, dress and stabilize...

Note: Once the placement of fill has begun, the operation should be continuous from grubbing through the completion of grading...

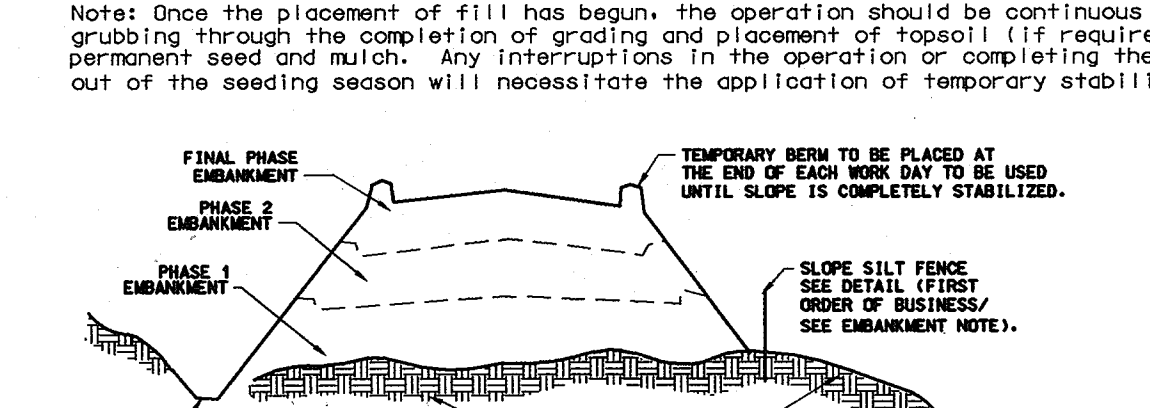


Figure 5 Incremental Stabilization - Embankment Fill

Comply with MD 378 Specifications.

Section II - Temporary Seeding

Vegetation - annual grass or grass used to provide cover on disturbed areas for up to 12 months...
A. Seed Mixtures - Temporary Seeding

- 1. Select one or more of the species or mixtures listed in Table 26...
2. For sites having soil tests performed, the rates shown on this table shall be deleted...

TEMPORARY SEEDING SUMMARY

Table with 5 columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (lb/1000 sq ft), Lime Rate.

Section III: Permanent Seeding

Seeding grass and legume to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

A. Seed Mixtures - Permanent Seeding

- 1. Select one or more of the species or mixtures listed in Table 26...
2. For sites having soil tests performed, the rates shown on this table shall be deleted...

PERMANENT SEEDING SUMMARY

Table with 5 columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (lb/1000 sq ft), Lime Rate.

Section IV - Sod

To provide quick cover on disturbed areas (2:1 grade or flatter).

A. General Specifications

- 1. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approved...
2. Sod shall be machine cut to a uniform thickness of 3/4", plus or minus 1/8", of the time of cutting...

B. Sod Installation

- 1. During periods of excessively high temperature or in areas having dry subsoil...
2. The first row of sod shall be laid in a straight line with subsequent rows placed parallel...

C. Sod Maintenance

- 1. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary...
2. After the first week, sod watering is required as necessary to maintain adequate moisture...

Section IV - Turfgrass Establishment

Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites...
Note: Choose certified material. Certified material is the best guarantee to provide purity...

A. Permanent Seeding

- 1. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive management...
2. Kentucky Bluegrass/Perennial Ryegrass - Full sun mixture - For use in full sun areas...
3. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas...

B. Ideal times of seeding

- Western MD: March 15 - June 1, August 1 - October 1 (Hardiness Zone - 5b, 6a)
Central MD: March 1 - May 15, August 15 - October 15 (Hardiness Zone - 6b)
Southern MD, Eastern Shore: March 1 - May 15, August 15 - October 15 (Hardiness Zone - 7a, 7b)

C. Irrigation

If soil moisture is deficient, supply new seedlings with adequate water for plant growth...

D. Repairs and Maintenance

- 1. Inspect all seeded areas for failures and make necessary repairs, replacements, and reseeding...
2. Once the vegetation is established, the site shall have 95% ground cover...

SEDIMENT CONTROL CONSTRUCTION NOTES:

- 1. STABILIZED CONSTRUCTION ENTRANCE LOCATIONS ARE TO BE DETERMINED BY THE CONTRACTOR AND THE COUNTY INSPECTOR.
2. THE MODIFIED STRAW BALE DICES SHOWN ON THE PLANS ARE FOR AN EXAMPLE OF PLACEMENT ALONG THE CONSTRUCTION AREAS.
3. INSTALLATION OF THE MSBD SHALL NOT INTERFERE WITH THE TRAFFIC CONTROL MEASURES NECESSARY FOR THE CONTRACTOR TO MAINTAIN ADEQUATE TRAFFIC FLOW...

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM...
Signature: Ronald G. Lepson, Date: 1/15/02

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT...
Signature: Fredric Philip Funkestein, Date: 9/28/2001

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL...
Signature: Jim Meyer, Date: 1/26/02

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT...
Signature: Howard Soil Conservation District, Date: 1/28/02

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
Signature: [Redacted], Date: 1/15/02
Signature: [Redacted], Date: 1/15/02

Dewberry & Davis LLC Engineers Planners Surveyors Landscape Architects
3120 Timanus Lane, Suite #311 Baltimore, Maryland 21244
(410) 265-9500 FAX(410) 265-8875

DES:
DRN:
CHK:
DATE:
BY: NO. REVISION DATE

CAPITAL PROJECT NO. J-4092
SCALE MAP NO.: DATE:

NOTES & DETAILS HILLTOP LANE & HARMEL DRIVE
SCALE AS SHOWN SHEET 14 OF 14
SEDIMENT CONTROL NOTES AND DETAILS SHEET NO. ES-5 OF ES-5